



# Preliminary Investigation Work Plan

Brookhaven Landfill  
Morgan County, Alabama

Prepared for  
**3M Company**

November 2019





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## 1. Introduction

GHD Services, Inc. (GHD) was retained by the 3M Company (3M) to complete Preliminary Investigation (PI) activities for the Brookhaven Landfill located in Decatur, Morgan County, Alabama (Site). The Site location is shown on Figure 1 and the Site Plan is shown on Figure 2.

This PI Work Plan outlines the field investigation strategy and was prepared in accordance with the Alabama Environmental Investigation and Remediation Guidance (AEIRG, dated February 2017), the Alabama Risk-Based Corrective Action Guidance Manual (ARBCA, dated February 2017), GHD's standard field procedures manual, and the requirements of the Alabama Voluntary Clean-up Program (VCP).

The information and data collected from the PI field investigation activities will be used to prepare a Preliminary Investigation Report (PIR). The PIR will also include information obtained from previously initiated activities including: public and private water well inventory, surface water intake inventory, and historical records search. The PIR will be used to develop the approach for future investigation and waste delineation activities at the Site.

## 2. Site Description and Background

The Site encompasses approximately 40 acres located in northwest Morgan County, Alabama and is owned by the City of Decatur. The Aquadome Recreation Center and Park (Aquadome) occupies the majority of the Site and includes a recreation building with an indoor pool and exterior sports fields, a playground, and a walking trail. An unoccupied building, formerly Brookhaven Middle School, is located in the southwestern portion of the Site. A concrete-lined drainage channel bisects the center portion of the Site and discharges to Dry Branch Creek approximately 0.2 miles northeast of the Site.

The Site was operated as a landfill from the mid-1940s until approximately 1963. The extent of the Landfill is presented on Figure 3 and appears to encompass the entire Site. Based upon review of documents obtained from ADEM, municipal and industrial waste was disposed or burned during landfill operations at the Site. No information is available regarding the types of industrial waste disposed at the site. In addition, no information is available regarding specific closure activities. Brookhaven Middle School and the Aquadome were constructed at the Site in 1969.

Mabry Engineering prepared a Closure Plan in 1980 to determine "any remaining requirements to safely close" the Site. The Closure Plan concluded that no further action was required with the exception of methane gas monitoring in the basement of Brookhaven Middle School. Based upon the Alabama Department of Public Health's review of the closure plan, four monitoring wells were installed at the Site in 1981; the locations of the monitoring wells are provided on Figures 2 and 3. In 1985, a Site investigation was conducted on behalf of the EPA to evaluate subsurface Site conditions. Concentrations of metals (copper, nickel, lead, and zinc), VOCs (toluene, tetrachloroethene, and trichloroethene, etc.), and pesticides were detected in soil, groundwater, and leachate samples. In 1990, an investigation was conducted on behalf of the EPA to determine the "potential threat of contact exposure" from ambient air and surficial soil. Low level concentrations of



carbon tetrachloride, xylenes, phenol, and 2-chlorophenol were detected in surficial soil and subsurface soil and carbon tetrachloride, methylene chloride, toluene, benzene, chloroform, and xylenes were detected in the ambient air samples. In 1995, EPA removed the Site from the Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS) computer inventory. Groundwater monitoring for pH, specific conductance, chloride, and iron was conducted by ADEM until 1996, when ADEM released the Site from groundwater monitoring.

## 2.1 Geology/Hydrogeology

The Site is located within the Highland Rim Physiographic Province with typical landforms of ridges and valleys. The topography is caused by the differential erosion/dissolution of the underlying bedrock with sandstone caps forming ridges with limestone valleys. The topographic relief is relatively flat with a concrete lined ditch bisecting the Site. The Site is anticipated to have a relatively thin weathered residuum underlain by the Tusculumbia Limestone.

The existing monitoring wells at the Site reportedly extend to depths of approximately 25.5 to 38 feet below ground surface (bgs). The depth to water has historically been measured in wells ranging between approximately 2 to 12 feet bgs. Based on the topography and location of the Site south of the Tennessee River, groundwater is anticipated to locally and regionally flow to the northeast towards the Tennessee River.

## 3. Initial Screening Activities

On July 31 and August 1, 2019, Anchor QEA performed initial screening activities which included collection of surface water samples at the locations provided on Figure 4. Sediment samples collected from the on-site drainage channel were composited; therefore, the sediment sample (SED) location is not provided on Figure 4. Surface water samples were collected from the on-Site drainage channel (BHC1 through BHC3), drainage channel located upstream of the Site (US1), and Dry Branch Creek (DBC1 and DBC2). Additional samples were collected from a pipe believed to discharge pool water from the Aquadome into the on-Site drainage channel and from a pipe believed to drain the athletic field (BHS5) which may have contained groundwater due to the dry weather conditions and lack of surface water when the samples were collected.

Samples were submitted to 3M Environmental Laboratory for analysis of perfluoroalkyl and polyfluoroalkyl substances (PFAS) parameters. The PFAS parameter list and analytical results summary are provided in Table 1. The sample results for perfluorooctanoic acid (PFOA), perfluorooctanesulfonate (PFOS), perfluorobutanesulfonate (PFBS) and perfluorohexanesulfonate (PFHS) for the surface water samples are presented on Figure 4. Samples were submitted to Alpha Analytical for analysis of conventional parameters, with the exception of the sample presumed to be Aquadome pool water discharge. The conventional parameters list and analytical results summary are provided in Table 2. The laboratory analytical reports are provided in Appendix A. Based on the results of the initial site screening, this PI workplan has been prepared to assess the current conditions of the landfill.





## 4. Proposed Scope of Work (SOW)

### 4.1 Health and Safety

A Site-Specific Health and Safety Plan (HASP) will be developed prior to on-Site field activities. The HASP will address all applicable GHD and OSHA health, safety, and training requirements. All on-Site personnel will have 40-hour HAZWOPER training and up to date 8-hour refresher. On-Site field activities will be completed in modified Level D PPE, which includes:

- Steel-toed boots
- Ansi Z87 approved safety glasses
- Long pants
- Nitrile gloves
- Hearing protection (if necessary)
- Hard hat (if overhead hazards are present)
- The PPE will be upgraded as necessary depending on Site conditions.

### 4.2 Surface Water, Seep, Sediment, Soil, and Groundwater Investigation

A Sampling and Analysis Plan (SAP) will be prepared to establish the sample collection procedures and quality assurance protocols for the PI scope of work activities.

Based upon the limited information related to the potential materials historically disposed at the Site and the chemical composition of the disposed materials, the PI activities will include the following contaminants of potential concern (COPCs) and applicable analytical method. The PFAS parameter list was developed based upon the initial screening analytical results. The following list of COPCs will be updated or reduced as analytical data becomes available at the Site.

- PFOA, PFOS, PFBS, and PFHS by ETS-8-044.3 or ETS-8-053.0
- Volatile Organic Compounds (VOCs) by EPA Method 8260
- Semi-volatile Organic Compounds (SVOCs) by EPA Method 8270
- Target Analyte List (TAL) Metals by EPA Method 6010/7471
- Polychlorinated biphenyls (PCBs) by EPA Method 8082
- Pesticides and Herbicides by EPA Method 8081/8151
- Nitrate and Cyanide by EPA Method 353.2/335.2

The PFAS parameters will be analyzed by the 3M Environmental Laboratory. All other COPCs will be analyzed by Test America, Inc. (TA), Nashville, Tennessee.





#### 4.2.1 Surface Water, Seep and Sediment Sample Collection

Up to ten (10) surface water/seep and corresponding sediment samples (if present) will be collected from drainage features observed at the Site. Proposed locations for identified surface water/seep sample locations (6 locations) are provided on Figure 4. Up to four (4) additional samples may be collected if additional surface water/seep locations are identified during the PI field activities. The sampling activities will be conducted following the procedures and quality assurance protocols established in the SAP. The samples will be analyzed for the COPCs. GPS coordinates will be collected for each sample location.

#### 4.2.2 Soil and Groundwater Investigation Activities

Based upon the regional geology in the Site area, the following soil and groundwater investigation activities are proposed.

- The four existing wells at the Site will not be used for PI activities due to poor condition and lack of well construction information. These wells will be properly abandoned following the requirements outlined in the AEIRG.
- To evaluate groundwater conditions in the overburden (if present) and in the competent bedrock zone, up to 7 groundwater monitoring well pairs (7 overburden wells/7 bedrock wells) will be installed. The approximate locations of the groundwater monitoring well pairs are presented on Figure 4.
- Each monitoring well pair location will be cleared for subsurface utilities prior to initiation of the drilling activities. It is anticipated that the overburden wells would extend to depths ranging from 5 to 20 feet bgs. The bedrock wells will be extended until groundwater within the bedrock is encountered. In order to isolate the potentially perched groundwater zone and minimize the potential of cross contamination from perched overburden groundwater to bedrock, the bedrock wells will be installed using a 6-inch isolation casing. All wells will be constructed with 2-inch diameter polyvinyl chloride (PVC) pipe and 5 to 10 feet of slotted PVC screen. A sand filter pack will be placed in each borehole approximately 2 feet above the top of the screen and a minimum 2-foot thick bentonite seal will be placed above the sandpack. Following hydration of the bentonite pellets, the remaining annular space will be sealed with cement-bentonite grout. The monitoring wells will be completed with an above-grade lockable well shroud. A concrete pad will be installed around each wellhead completion.
- Soil samples will be collected during installation of the monitoring wells and screened with a photoionization meter (PID). Up to 4 soil samples (28 samples and 2 duplicates) will be collected from each monitoring well pair location, which includes collection of 2 surficial soil samples (depths of 0 to 0.5 and 0.5 to 1 foot bgs) to evaluate surficial soil conditions. The soil samples will be collected following the procedures and quality assurance protocols established in the SAP.
- Upon completion, each monitoring well will be developed using a surge block, or similar, and a submersible pump, extracting up to ten well volumes or until clear groundwater and geochemical parameter stabilization is obtained.
- The ground surface and top-of-casing elevations and northing and easting coordinates will be surveyed by an Alabama licensed surveyor.



- Static water levels will be collected at each monitoring well to determine groundwater flow direction and horizontal hydraulic gradient in both the overburden and bedrock. Additionally, the well pairs will be used to calculate vertical gradient to provide potential chemical transport information.
- Groundwater samples will be collected from each monitoring well (14 samples) and analyzed for the COPCs. The groundwater samples will be collected following the procedures and quality assurance protocols established in the SAP.
- Investigation derived waste (IDW) soils will be stockpiled on Site or transferred to roll-off boxes and IDW water will be transferred to 55-gallon drums or water storage tanks and stored at the Site. Up to 4 composite waste characterization samples will be collected and analyzed for Toxicity Characteristic Leaching Procedure (TCLP) VOCs, TCLP Metals, and Reactivity, Corrosivity, and Ignitability (RCI). Based on the analytical results, the IDW will be characterized and managed on-Site or disposed of at an appropriate off-Site disposal facility.

## 5. Preliminary Investigation Report

The PIR will provide a summary of the following:

- Site history and usage
- Surrounding land use
- Surface water locations
- Public and private well inventory
- Surface water intake inventory
- Historical records review
- Utility inventory
- Field investigation

The PIR will include analytical data summary tables, potentiometric figures, and analytical data concentration maps. The well inventory survey, soil boring logs, monitoring well construction logs, field screening results, waste characterization documentation, disposal manifests, analytical data reports and data validation reports will be provided as appendices of the PIR. The PIR will provide recommendations for future investigation activities at the Site.

## 6. Schedule

The PI activities are anticipated to begin during October 2019. It is anticipated that the site preparation activities will be completed within 45 days and PI activities will be completed within approximately 120 days. The PIR will be completed within approximately 30 days of receipt of the final laboratory analytical reports.



All of Which is Respectfully Submitted,

GHD

A handwritten signature in blue ink that reads "Lanea Duckworth".

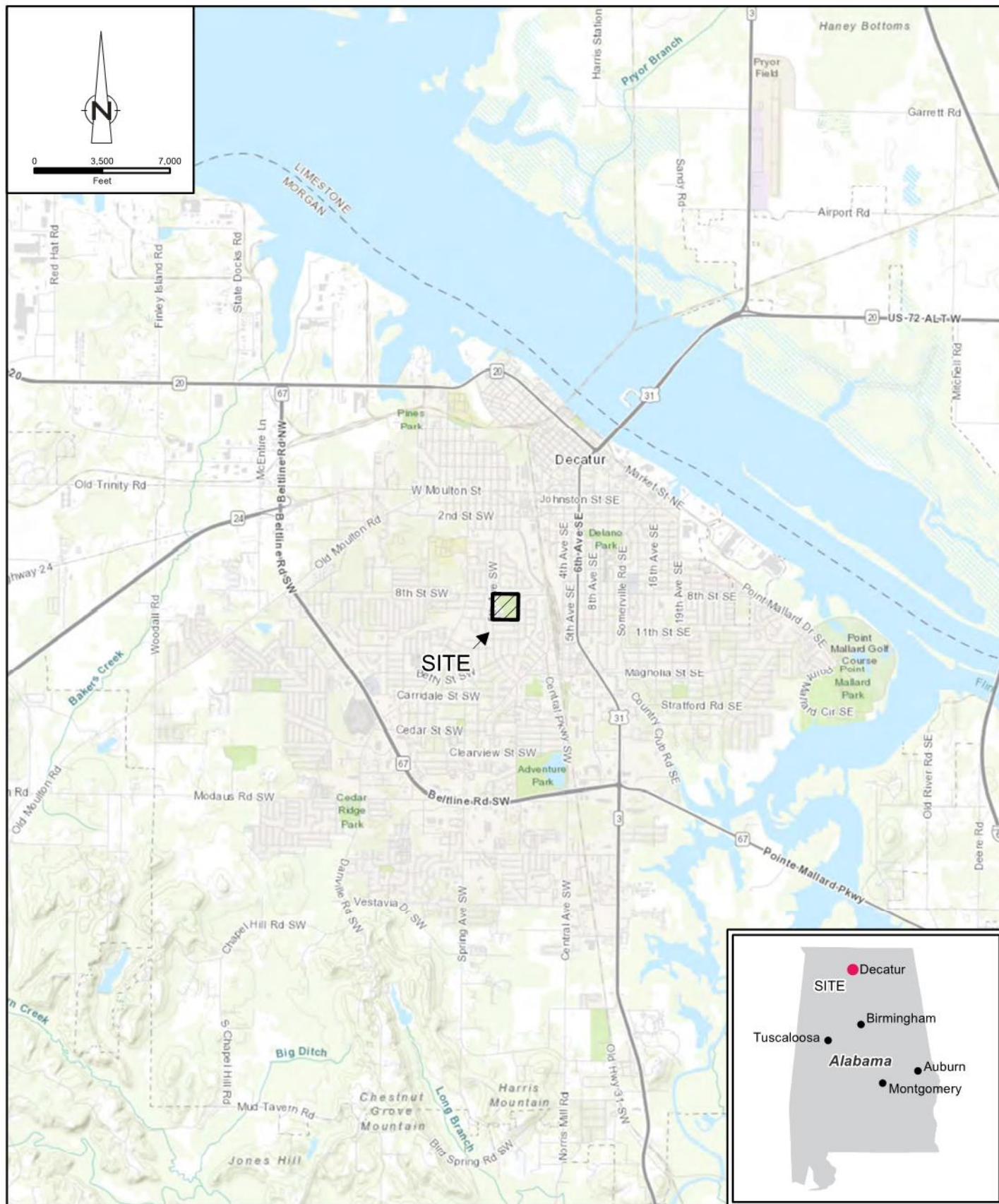
Lanea Duckworth

A handwritten signature in blue ink that reads "Andrew Parker P.G.". The signature is stylized, starting with a large "A" and ending with a long horizontal stroke.

Andrew Parker P.G.



## Figures



Source: ESRI Topographic Basemap, Accessed 2019  
 Coordinate System: NAD 1983 StatePlane Alabama West FIPS 0102 Feet



3M COMPANY  
 BROOKHAVEN LANDFILL  
 PI WORKPLAN

11200576  
 Sep 16, 2019

## SITE LOCATION MAP

FIGURE 1



**Site Coordinates**  
Lat/Long 34.587°, -86.992°



**Legend**  
● Historical Monitoring Well Location  
□ Appox. Site Boundary

Source: Foreground Imagery GHD; Imagery Date: 10/17/2018;  
Background Imagery Google 2018; Imagery Date: 10/31/2016

0 100 200 300  
Feet

Coordinate System:  
NAD 1983 StatePlane Alabama  
West FIPS 0102



3M COMPANY  
BROOKHAVEN LANDFILL  
PI WORKPLAN

SITE PLAN

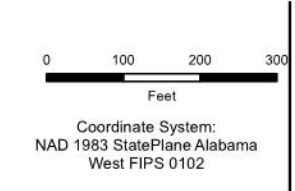
11200576  
Sep 16, 2019

FIGURE 2



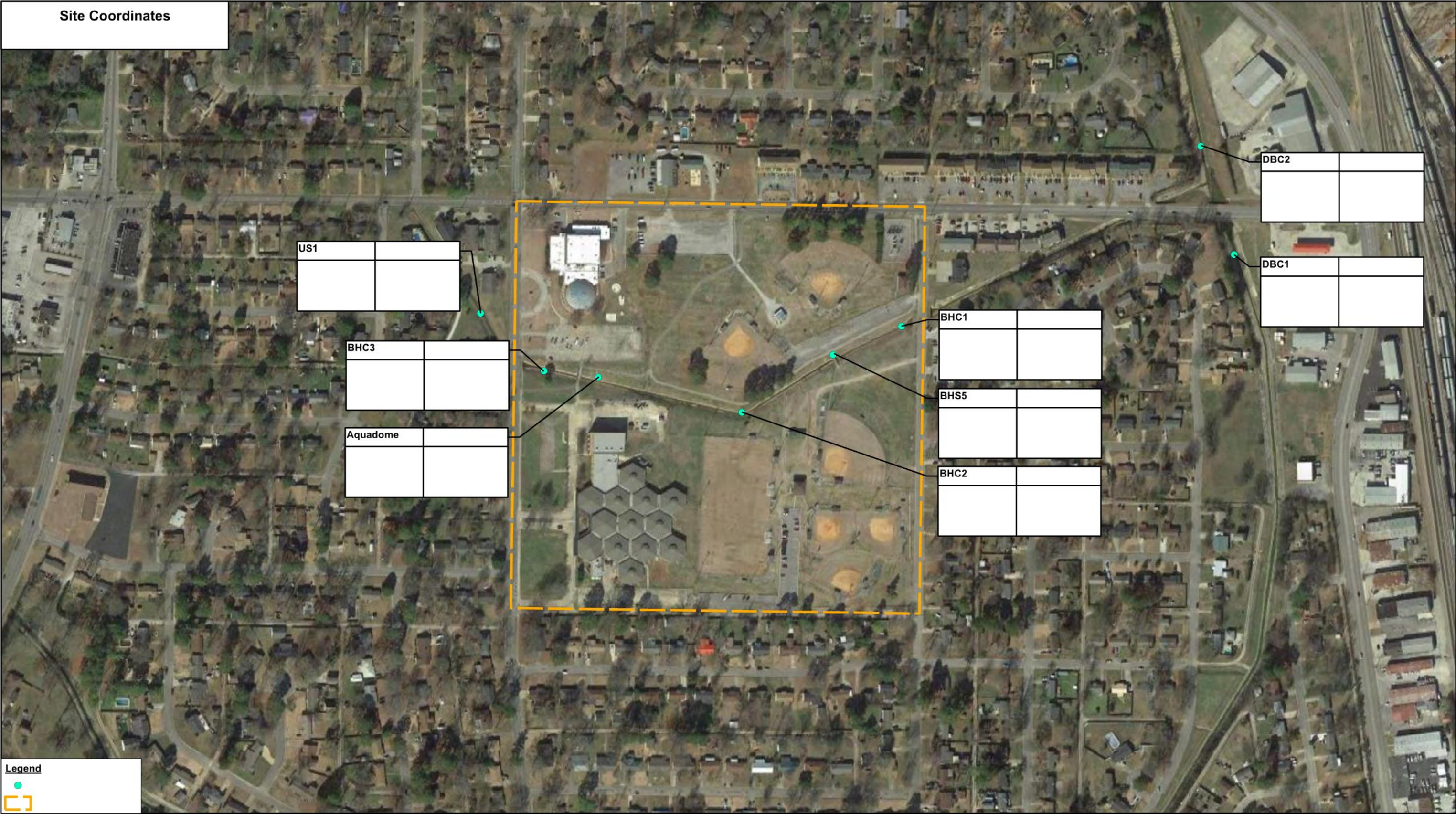


Source: Foreground Imagery GHD; Imagery Date: 10/17/2018;  
Background Imagery Google 2018; Imagery Date: 10/31/2016





Site Coordinates



Legend



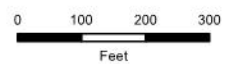
**Site Coordinates**  
Lat/Long 34.587°, -86.992°



**Legend**

- Proposed Monitor Well Pair Location
- Proposed Surface Water/Seep Sampling Location
- Approx. Site Boundary

Source: Foreground Imagery GHD; Imagery Date: 10/17/2018;  
Background Imagery Google 2018; Imagery Date: 10/31/2016



Coordinate System:  
NAD 1983 StatePlane Alabama  
West FIPS 0102



3M COMPANY  
BROOKHAVEN LANDFILL  
PI WORKPLAN

PROPOSED SAMPLE/ MONITORING WELL LOCATION MAP

11200576  
Sep 30, 2019

FIGURE 5



## Tables

**Table 1**  
**Initial Investigation**  
**PFAS Parameters Summary**  
**Brookhaven Landfill**  
**Decatur, Alabama**

Sample Location:	BHC1	BHC2	BHC3	BHC3 (DUP) <sup>1</sup>	DBC1	DBC2	US1	BHS5	AQUADOME	SED	
Sample ID:	BHC1-073119	BHC2-073119	BHC3-073119	BHC3-073119FD	DBC1-080119	DBC2-080119	US1-080119	BHS5-080119	AQUADOME-080119	SED-080119	
Sample Date:	7/31/2019	7/31/2019	7/31/2019	7/31/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	8/1/2019	
PFAS Parameters	Units	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/kg	
PFHxA		0.0347	0.0312	0.034	0.039	0.0295	0.0295	0.0474	0.0285	<0.0250	<0.358
PFHpA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.895
PFOA		0.099	0.0375	0.0555 <sup>(1)</sup>	0.0489	0.0479	0.0479	0.0595	0.178	<0.0240	0.396
PFNA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.179
PFDA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.179
PFUnA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.358
PFDoA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.192
PFTra		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0895
PFTeDA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0895
PFBS		0.0675	0.0628	0.0744	0.0786	0.0545	0.0545	0.116	0.0667	<0.0250	0.377
PFHS		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.028	<0.0250	0.144
PFOS		0.0576	0.0353	0.0289	0.0303	0.079	0.079	0.0659	0.611	<0.0232	3.77
N-MeFOSAA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0804
N-EtFOSAA		<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	<0.0250	0.142	<0.0250	0.287

## Notes:

- 1) Not Applicable
- 2) Samples were prepared in duplicate and average concentration presented.
- 3) Samples were analyzed using internal standard calibration. The analytical data uncertainties associated with the reported results are as follows:  
PFHxA ± 17%, PFHpA ± 18%, PFOA ± 14%, PFNA ± 15%, PFDA ± 15%, PFUnA ± 16%, PFDoA ± 21%, PFTra ± 33%, PFTeDA ± 36%, PFBS ± 19%,  
PFHS ± 16%, PFOS ± 17%, N-MeFOSAA ± 37%, and N-EtFOSAA ± 24%.
- 4) <sup>1</sup> The sample / sample duplicate RPD did not meet method acceptance criteria of ≤20%.
  - 5) PFHxA Perfluorohexanoic Acid
  - 6) PFHpA Perfluoroheptanoic Acid
  - 7) PFOA Perfluorooctanoic Acid
  - 8) PFNA Perfluorononanoic Acid
  - 9) PFDA Perfluorodecanoic Acid
  - 10) PFUnA Perfluoroundecanoic Acid
  - 11) PFDoA Perfluorododecanoic Acid
  - 12) PFTra Perfluorotridecanoic Acid
  - 13) PFTeDA Perfluorotetradecanoic Acid
  - 14) PFBS Perfluorobutanesulfonate
  - 15) PFHS Perfluorohexanesulfonate
  - 16) PFOS Perfluorooctanesulfonate
  - 17) N-MeFOSAA N-methyl perfluorooctane sulfonamidoacetic acid
  - 18) N-EtFOSAA N-ethyl perfluorooctane sulfonamidoacetic acid
  - 19) Samples collected by Anchor QEA in July and August 2019.

Table 2  
Initial Investigation  
Conventional Parameters Summary  
Brookhaven Landfill  
Decatur, Alabama

Sample Location: Sample ID: Sample Date: Matrix Conventional Parameters		BHC1 BHC1-073119 7/31/2019 WS	BHC2 BHC2-073119 7/31/2019 WS	BHC3 BHC3-073119 7/31/2019 WS	BHC3 (DUP) BHC3-073119 7/31/2019 WS	BHS5 BHS5-080119 8/1/2019 WSP	DBC1 DBC1-080119 8/1/2019 WS	DBC2 DBC2-080119 8/1/2019 WS	SED SED-080119 8/1/2019 SE	US1 US1-080119 8/1/2019 WS
	Units									
Cyanide	mg/kg	--	--	--	--	--	--	--	3.1 UJ	--
Chemical oxygen demand	mg/L	19 J	17 J	21	20 U	46	37	17 J	--	91
Cyanide	mg/L	0.005 U	0.005 U	0.005 U	0.005 U	0.002 J	0.005 U	0.005 U	--	0.005 U
Nitrate + nitrite as nitrogen	mg/L	1.1	1.6	1.7	1.8	0.1 U	0.1 U	0.61	--	0.1 U
Total suspended solids	mg/L	40	9.2	5 U	5 U	200	9.5	5 U	--	340
Chemical oxygen demand, Dissolved	mg/L	7.8 J	7.8 J	20 U	20 U	30	33	17 J	--	71
Dissolved organic carbon, Dissolved	mg/L	4.2 J	3.1 J	1.6 J	1.5 J	6.6 J	10 J	5.1 J	--	26 J
Total organic carbon	mg/L	3.8	2.4	1.4	1.2	4.7	9.6	4.8	--	24
Total Solids	pct	--	--	--	--	--	--	--	31.2	--
Metals (SW1311)										
Aluminum	µg/L	--	--	--	--	--	--	--	1000 U	--
Antimony	µg/L	--	--	--	--	--	--	--	500 U	--
Arsenic	µg/L	--	--	--	--	--	--	--	1000 U	--
Barium	µg/L	--	--	--	--	--	--	--	646	--
Beryllium	µg/L	--	--	--	--	--	--	--	100 U	--
Cadmium	µg/L	--	--	--	--	--	--	--	100 U	--
Calcium	µg/L	--	--	--	--	--	--	--	656000	--
Chromium	µg/L	--	--	--	--	--	--	--	200 U	--
Cobalt	µg/L	--	--	--	--	--	--	--	200 U	--
Copper	µg/L	--	--	--	--	--	--	--	200 U	--
Iron	µg/L	--	--	--	--	--	--	--	116 J	--
Lead	µg/L	--	--	--	--	--	--	--	500 U	--
Magnesium	µg/L	--	--	--	--	--	--	--	4590	--
Manganese	µg/L	--	--	--	--	--	--	--	159	--
Mercury	µg/L	--	--	--	--	--	--	--	1 U	--
Nickel	µg/L	--	--	--	--	--	--	--	500 U	--
Potassium	µg/L	--	--	--	--	--	--	--	25000 U	--
Selenium	µg/L	--	--	--	--	--	--	--	500 U	--
Silver	µg/L	--	--	--	--	--	--	--	100 U	--
Thallium	µg/L	--	--	--	--	--	--	--	200 U	--
Vanadium	µg/L	--	--	--	--	--	--	--	100 U	--
Zinc	µg/L	--	--	--	--	--	--	--	160 J	--
Metals										
Aluminum	µg/L	15.4	30.9	5.75 J	5.05 J	728	50.8	18.8	--	57.5
Antimony	µg/L	0.85 J	0.61 J	1.53 J	4 U	4 U	1.69 J	0.6 J	--	0.53 J
Arsenic	µg/L	0.43 J	0.44 J	0.24 J	0.5 U	7.16	1.48	0.59	--	2.89
Barium	µg/L	73.81	104.9	75.83	76.42	811.7	38.42	74.45	--	30.06
Beryllium	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.12 J	0.3 U	0.3 U	--	0.3 U
Boron	µg/L	48.1	38.7	24.6	23.8	222	28	52.6	--	28.4
Cadmium	µg/L	0.2 U	0.2 U	0.06 J	0.06 J	0.22	0.2 U	0.2 U	--	0.2 U
Calcium	µg/L	66000	75800	81500	81800	117000	39900	54800	--	28000
Chromium	µg/L	1 U	1 U	1 U	1 U	2.77	1 U	1 U	--	0.49 J



Table 2  
Initial Investigation  
Conventional Parameters Summary  
Brookhaven Landfill  
Decatur, Alabama

Sample Location: Sample ID: Sample Date: Matrix Conventional Parameters		BHC1 BHC1-073119 7/31/2019 WS	BHC2 BHC2-073119 7/31/2019 WS	BHC3 BHC3-073119 7/31/2019 WS	BHC3 (DUP) BHC3-073119 7/31/2019 WS	BHS5 BHS5-080119 8/1/2019 WSP	DBC1 DBC1-080119 8/1/2019 WS	DBC2 DBC2-080119 8/1/2019 WS	SED SED-080119 8/1/2019 SE	US1 US1-080119 8/1/2019 WS
	Units									
Cobalt	µg/L	0.5 U	0.5 U	0.25 J	0.24 J	2.1	0.18 J	0.5 U	--	0.78
Copper	µg/L	1.78	2.5	0.44 J	1 U	9.4	4.26	1.72	--	6.07
Iron	µg/L	752	894	71.7	70.3	106000	76.6	191	--	433
Lead	µg/L	1 U	0.39 J	1 U	1 U	9.04	1 U	1 U	--	2.1
Magnesium	µg/L	3920	3720	3400	3310	8960	2240	3750	--	2900
Manganese	µg/L	15.17	95.5	227.4	214.9	301.9	24.98	30.31	--	121.2
Mercury	µg/L	0.01 J	0.01 J	0.05 U	0.01 J	0.05	0.01 J	0.01 J	--	0.07
Molybdenum	µg/L	2 U	2 U	0.85 J	2 U	2 U	1.75 J	2 U	--	1.93 J
Nickel	µg/L	2 U	2 U	2 U	2 U	2.43	2 U	2 U	--	3.49
Potassium	µg/L	2580	2190	1650	1520	11800	1790	2690	--	8450
Selenium	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Silver	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	0.4 U
Sodium	µg/L	6010	6740	4120	3990	13200	6650	5660	--	8460
Thallium	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.16 J	0.5 U	--	0.5 U
Vanadium	µg/L	5 U	5 U	5 U	5 U	5.28	5 U	5 U	--	5 U
Zinc	µg/L	10 U	3.78 J	4.21 J	10 U	42.3	4.27 J	10 U	--	33.2
Metals, Dissolved										
Aluminum	µg/L	4.91 J	7.28 J	3.95 J	3.53 J	7.14 J	43.7	16.8	--	24.9
Antimony	µg/L	0.43 J	1.15 J	0.51 J	0.51 J	4 U	0.59 J	4 U	--	4 U
Arsenic	µg/L	0.36 J	0.27 J	0.5 U	0.5 U	0.39 J	1.5	0.45 J	--	2.74
Barium	µg/L	68.53	69.94	75.45	75.24	282.8	35.57	72.54	--	21.04
Beryllium	µg/L	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	--	0.3 U
Boron	µg/L	48	37.5	25.6	28.6	202	31.9	53.4	--	13.9 U
Cadmium	µg/L	0.2 U	0.2 U	0.09 J	0.06 J	0.2 U	0.2 U	0.2 U	--	0.2 U
Calcium	µg/L	64800	73500	79700	80500	99000	38500	55000	--	24200
Chromium	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Cobalt	µg/L	0.5 U	0.5 U	0.23 J	0.17 J	0.33 J	0.19 J	0.5 U	--	0.6
Copper	µg/L	1.67	1.32	1 U	1 U	0.68 J	4.72	1.82	--	2.8
Iron	µg/L	309	136	62.9	46.1 J	38.1 J	28.4 J	52.1	--	83.1
Lead	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Magnesium	µg/L	3830	3720	3320	3360	8510	2260	3780	--	2560
Manganese	µg/L	1.1	3.66	214.7	201.8	187	1.09	4.99	--	4.06
Mercury	µg/L	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	0.05 U	--	0.05 U
Molybdenum	µg/L	2 U	1.18 J	2 U	2 U	2 U	0.92 J	2 U	--	1.95 J
Nickel	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	0.73 J
Potassium	µg/L	2480	1970	1560	1480	11200	1720	2620	--	7730
Selenium	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Silver	µg/L	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U	--	0.4 U
Sodium	µg/L	5920	6850	4080	4160	13100	7040	5770	--	7640
Thallium	µg/L	0.5 U	0.47 J	0.5 U	0.17 J	0.5 U	0.5 U	0.5 U	--	0.5 U
Vanadium	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Zinc	µg/L	10 U	10 U	3.44 J	10 U	3.64 J	4.56 J	4.11 J	--	7.08 J

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	Units									
Volatile Organics										
1,1,1,2-Tetrachloroethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,1,1-Trichloroethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,1,2,2-Tetrachloroethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,1,2-Trichloroethane	µg/L	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	--	0.75 U
1,1-Dichloroethane	µg/L	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	--	0.75 U
1,1-Dichloroethene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,1-Dichloropropene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2,3-Trichlorobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2,3-Trichloropropane	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
1,2,4-Trichlorobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2,4-Trimethylbenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2-Dibromo-3-chloropropane	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2-Dichlorobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,2-Dichloroethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,2-Dichloroethene, cis-	µg/L	4.9	0.5 U	0.5 U	0.5 U	0.5 U	0.25 J	0.47 J	--	0.5 U
1,2-Dichloroethene, trans-	µg/L	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	0.75 U	--	0.75 U
1,2-Dichloropropane	µg/L	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	1.8 U	--	1.8 U
1,3,5-Trimethylbenzene (Mesitylene)	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,3-Dichlorobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,3-Dichloropropane	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,3-Dichloropropene, cis-	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,3-Dichloropropene, trans-	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
1,4-Dichloro-2-butene, trans-	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
1,4-Dichlorobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	0.98 J	2.5 U	2.5 U	--	2.5 U
2,2-Dichloropropane	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
2-Chlorotoluene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
2-Hexanone (Methyl butyl ketone)	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
4-Chlorotoluene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
4-Methyl-2-pentanone (Methyl isobutyl ketone)	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Acetone	µg/L	3.6 J	4.4 J	2 J	3.5 J	5.9	11	5.4	--	39
Acrylonitrile	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Benzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Bromobenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Bromochloromethane	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Bromodichloromethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Bromoform (Tribromomethane)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Bromomethane (Methyl bromide)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Carbon disulfide	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Carbon tetrachloride (Tetrachloromethane)	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Chlorobenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	1.9	0.5 U	0.5 U	--	0.5 U
Chloroethane	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U



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Units										
Chloroform	µg/L	0.75 U	2.1	0.75 U	0.23 J	0.75 U	0.75 U	0.75 U	--	0.75 U
Chloromethane	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Cymene, p- (4-Isopropyltoluene)	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Dibromochloromethane	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Dibromomethane	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Dichlorodifluoromethane	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Dichloromethane (Methylene chloride)	µg/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	--	3 U
Diethyl ether	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Ethyl methacrylate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Ethylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Ethylene dibromide (1,2-Dibromoethane)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
Isopropylbenzene (Cumene)	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
m,p-Xylene	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Methyl ethyl ketone (2-Butanone)	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Methyl tert-butyl ether (MTBE)	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Naphthalene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
n-Butylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
n-Propylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	--	0.5 U
o-Xylene	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
sec-Butylbenzene	µg/L	0.5 U	0.5 U	0.5 U	0.5 U	0.5 UJ	0.5 UJ	0.5 UJ	--	0.5 UJ
Styrene	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
tert-Butylbenzene	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Tetrachloroethene (PCE)	µg/L	0.36 J	0.78	2.2	2.2	0.5 U	0.5 U	0.5 U	--	0.5 U
Tetrahydrofuran	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Toluene	µg/L	0.75 U	0.75 U	0.75 U	0.75 U	0.2 J	0.75 U	0.75 U	--	0.75 U
Trichloroethene (TCE)	µg/L	3.8	0.5 U	0.5 U	0.5 U	0.5 U	0.5 U	0.33 J	--	0.5 U
Trichlorofluoromethane (Fluorotrichloromethane)	µg/L	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	2.5 U	--	2.5 U
Vinyl acetate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Vinyl chloride	µg/L	0.69 J	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Semivolatile Organics										
1,2,4-Trichlorobenzene	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
1,2-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
1,3-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
1,4-Dichlorobenzene	µg/L	2 U	2 U	2 U	2 U	0.56 J	2 U	2 U	--	2 U
1-Methylnaphthalene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2,2'-Oxybis (1-chloropropane)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2,4,5-Trichlorophenol	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2,4,6-Trichlorophenol	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2,4-Dichlorophenol	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2,4-Dimethylphenol	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2,4-Dinitrophenol	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	20 U



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	Units									
2,4-Dinitrotoluene	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2,6-Dinitrotoluene	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2-Chloronaphthalene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2-Chlorophenol	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2-Methylnaphthalene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2-Methylphenol (o-Cresol)	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2-Nitroaniline	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
2-Nitrophenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
3,3'-Dichlorobenzidine	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
3-Methylphenol & 4-Methylphenol (m&p-Cresol)	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
3-Nitroaniline	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
4-Bromophenyl-phenyl ether	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
4-Chloro-3-methylphenol	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
4-Chloroaniline	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
4-Chlorophenyl phenyl ether	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
4-Nitroaniline	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
4-Nitrophenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Acenaphthene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Acenaphthylene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Aniline	µg/L	2 U	2 U	2 U	2 U	2 UJ	2 UJ	2 UJ	--	2 UJ
Anthracene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Azobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzidine	µg/L	20 UJ	20 UJ	20 UJ	20 UJ	--	--	--	--	--
Benzo(a)anthracene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzo(a)pyrene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzo(b)fluoranthene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzo(g,h,i)perylene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzo(k)fluoranthene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Benzoic acid	µg/L	50 U	50 U	50 U	50 U	50 U	50 U	50 U	--	50 U
Benzyl alcohol	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Biphenyl (1,1'-Biphenyl)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
bis(2-Chloroethoxy)methane	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
bis(2-Chloroethyl)ether	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
bis(2-Ethylhexyl)phthalate	µg/L	3 U	3 U	3 U	3 U	2.8 J	3 U	3 U	--	3 U
Butylbenzyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Carbazole	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Chrysene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Dibenzo(a,h)anthracene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Dibenzofuran	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Diethyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Dimethyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Di-n-butyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U

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Units										
Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Di-n-octyl phthalate	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Fluoranthene	µg/L	2 U	2 U	0.44 J	2 U	2 U	2 U	2 U	--	2 U
Fluorene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Hexachlorobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Hexachlorocyclopentadiene	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	20 U
Hexachloroethane	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Indeno(1,2,3-c,d)pyrene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Isophorone	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Naphthalene	µg/L	2 U	2 U	2 U	2 U	0.54 J	2 U	2 U	--	2 U
Nitrobenzene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
n-Nitrosodimethylamine	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
n-Nitrosodi-n-propylamine	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
n-Nitrosodiphenylamine	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Pentachlorophenol	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Phenanthrene	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
Phenol	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Pyrene	µg/L	2 U	2 U	0.38 J	2 U	2 U	2 U	2 U	--	2 U
Pyridine	µg/L	3.5 U	3.5 U	3.5 U	3.5 U	3.5 UJ	3.5 UJ	3.5 UJ	--	3.5 UJ
Total PAH (16) (U = 1/2)	µg/L	2 U	2 U	15.82 J	2 U	16.54 J	2 U	2 U	--	2 U
Total PAH (16) (U = 0)	µg/L	2 U	2 U	0.82 J	2 U	0.54 J	2 U	2 U	--	2 U
Polycyclic Aromatic Hydrocarbons										
1,4-Dichlorobutane	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Pesticides										
4,4'-DDD (p,p'-DDD)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
4,4'-DDE (p,p'-DDE)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
4,4'-DDT (p,p'-DDT)	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Aldrin	µg/kg	--	--	--	--	--	--	--	5.02 UJ	--
Chlordane	µg/kg	--	--	--	--	--	--	--	40.8 U	--
Chlordane, alpha- (Chlordane, cis-)	µg/kg	--	--	--	--	--	--	--	3.58 J	--
Chlordane, beta- (Chlordane, trans-)	µg/kg	--	--	--	--	--	--	--	4.32 J	--
Dieldrin	µg/kg	--	--	--	--	--	--	--	13.3	--
Endosulfan sulfate	µg/kg	--	--	--	--	--	--	--	2.09 U	--
Endosulfan, alpha- (I)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Endosulfan, beta (II)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Endrin	µg/kg	--	--	--	--	--	--	--	2.09 U	--
Endrin aldehyde	µg/kg	--	--	--	--	--	--	--	6.27 U	--
Endrin ketone	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Heptachlor	µg/kg	--	--	--	--	--	--	--	2.51 U	--
Heptachlor epoxide	µg/kg	--	--	--	--	--	--	--	3.92 J	--
Hexachlorocyclohexane (BHC), alpha-	µg/kg	--	--	--	--	--	--	--	1.74 J	--



Table 2  
Initial Investigation  
Conventional Parameters Summary  
Brookhaven Landfill  
Decatur, Alabama

Sample Location: Sample ID: Sample Date: Matrix Conventional Parameters		BHC1 BHC1-073119 7/31/2019 WS	BHC2 BHC2-073119 7/31/2019 WS	BHC3 BHC3-073119 7/31/2019 WS	BHC3 (DUP) BHC3-073119 7/31/2019 WS	BHS5 BHS5-080119 8/1/2019 WSP	DBC1 DBC1-080119 8/1/2019 WS	DBC2 DBC2-080119 8/1/2019 WS	SED SED-080119 8/1/2019 SE	US1 US1-080119 8/1/2019 WS
Units										
Hexachlorocyclohexane (BHC), beta-	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Hexachlorocyclohexane (BHC), delta-	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Hexachlorocyclohexane (BHC), gamma- (Lindane)	µg/kg	--	--	--	--	--	--	--	2.09 U	--
Methoxychlor	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Toxaphene	µg/kg	--	--	--	--	--	--	--	94.1 U	--
Sum DDD (U = 1/2)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Sum DDE (U = 1/2)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Sum DDT (U = 1/2)	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Total DDx (U = 1/2)	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Sum DDD (U = 0)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Sum DDE (U = 0)	µg/kg	--	--	--	--	--	--	--	5.02 U	--
Sum DDT (U = 0)	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Total DDx (U = 0)	µg/kg	--	--	--	--	--	--	--	9.41 U	--
Pesticides (µg/L)										
4,4'-DDD (p,p'-DDD)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.006 J	0.029 U	0.029 U	--	0.029 U
4,4'-DDE (p,p'-DDE)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.029 U	0.029 U	0.029 U	--	0.029 U
4,4'-DDT (p,p'-DDT)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Aldrin	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Chlordane	µg/L	0.143 UJ	0.143 U	0.143 UJ	0.143 U	0.143 U	0.143 U	0.143 U	--	0.143 U
Chlordane, alpha- (Chlordane, cis-)	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Chlordane, beta- (Chlordane, trans-)	µg/L	0.014 UJ	0.014 UJ	0.014 UJ	0.009 J	0.014 U	0.014 U	0.014 U	--	0.014 U
Dieldrin	µg/L	0.009 J	0.033 J	0.021 J	0.048 J	0.029 U	0.008 J	0.014 J	--	0.029 U
Endosulfan sulfate	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Endosulfan, alpha- (I)	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Endosulfan, beta (II)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Endrin	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.029 U	0.029 U	0.029 U	--	0.029 U
Endrin aldehyde	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Endrin ketone	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Heptachlor	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Heptachlor epoxide	µg/L	0.012 J	0.034 J	0.02 J	0.041 J	0.014 U	0.006 J	0.015 J	--	0.014 U
Hexachlorocyclohexane (BHC), alpha-	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Hexachlorocyclohexane (BHC), beta-	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.055 J	--	0.014 U
Hexachlorocyclohexane (BHC), delta-	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.005 J	--	0.014 U
Hexachlorocyclohexane (BHC), gamma- (Lindane)	µg/L	0.014 UJ	0.014 U	0.014 UJ	0.014 U	0.014 U	0.014 U	0.014 U	--	0.014 U
Methoxychlor	µg/L	0.143 UJ	0.143 UJ	0.143 UJ	0.143 UJ	0.143 UJ	0.143 UJ	0.143 UJ	--	0.143 UJ
Toxaphene	µg/L	0.143 UJ	0.143 U	0.143 UJ	0.143 U	0.143 U	0.143 U	0.143 U	--	0.143 U
Sum DDD (U = 1/2)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.006 J	0.029 U	0.029 U	--	0.029 U
Sum DDE (U = 1/2)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.029 U	0.029 U	0.029 U	--	0.029 U
Sum DDT (U = 1/2)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Total DDx (U = 1/2)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.035 J	0.029 UJ	0.029 UJ	--	0.029 UJ
Sum DDD (U = 0)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.006 J	0.029 U	0.029 U	--	0.029 U
Sum DDE (U = 0)	µg/L	0.029 UJ	0.029 U	0.029 UJ	0.029 U	0.029 U	0.029 U	0.029 U	--	0.029 U

Table 2  
Initial Investigation  
Conventional Parameters Summary  
Brookhaven Landfill  
Decatur, Alabama

Sample Location: Sample ID: Sample Date: Matrix Conventional Parameters		BHC1 BHC1-073119 7/31/2019 WS	BHC2 BHC2-073119 7/31/2019 WS	BHC3 BHC3-073119 7/31/2019 WS	BHC3 (DUP) BHC3-073119 7/31/2019 WS	BHS5 BHS5-080119 8/1/2019 WSP	DBC1 DBC1-080119 8/1/2019 WS	DBC2 DBC2-080119 8/1/2019 WS	SED SED-080119 8/1/2019 SE	US1 US1-080119 8/1/2019 WS
	Units									
Sum DDT (U = 0)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	--	0.029 UJ
Total DDx (U = 0)	µg/L	0.029 UJ	0.029 UJ	0.029 UJ	0.029 UJ	0.006 J	0.029 UJ	0.029 UJ	--	0.029 UJ
<b>Herbicides</b>										
2,2-Dichloropropionic acid (Dalapon)	µg/kg	--	--	--	--	--	--	--	104 U	--
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	µg/kg	--	--	--	--	--	--	--	519 U	--
2,4,5-TP (Silvex)	µg/kg	--	--	--	--	--	--	--	519 U	--
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/kg	--	--	--	--	--	--	--	519 U	--
2,4-DB (2,4-D derivative)	µg/kg	--	--	--	--	--	--	--	519 U	--
Dicamba	µg/kg	--	--	--	--	--	--	--	104 U	--
Dichloroprop	µg/kg	--	--	--	--	--	--	--	104 U	--
Mecoprop (MCP)	µg/kg	--	--	--	--	--	--	--	10400 U	--
Mephanac (MCPA)	µg/kg	--	--	--	--	--	--	--	10400 U	--
<b>Herbicides</b>										
2,2-Dichloropropionic acid (Dalapon)	µg/L	20 U	20 U	20 U	20 U	20 U	20 U	20 U	--	20 U
2,4,5-T (2,4,5-Trichlorophenoxyacetic acid)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2,4,5-TP (Silvex)	µg/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	--	2 U
2,4-D (2,4-Dichlorophenoxyacetic acid)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
2,4-DB (2,4-D derivative)	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Dicamba	µg/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	--	1 U
Dichloroprop	µg/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	--	10 U
Dinoseb	µg/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	--	5 U
Mecoprop (MCP)	µg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	--	500 U
Mephanac (MCPA)	µg/L	500 U	500 U	500 U	500 U	500 U	500 U	500 U	--	500 U
<b>PCB Aroclors</b>										
Aroclor 1016	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1221	µg/kg	--	--	--	--	--	--	--	105 U	--



Table 2  
Initial Investigation  
Conventional Parameters Summary  
Brookhaven Landfill  
Decatur, Alabama

Sample Location: Sample ID: Sample Date: Matrix Conventional Parameters		BHC1 BHC1-073119 7/31/2019 WS	BHC2 BHC2-073119 7/31/2019 WS	BHC3 BHC3-073119 7/31/2019 WS	BHC3 (DUP) BHC3-073119 7/31/2019 WS	BHS5 BHS5-080119 8/1/2019 WSP	DBC1 DBC1-080119 8/1/2019 WS	DBC2 DBC2-080119 8/1/2019 WS	SED SED-080119 8/1/2019 SE	US1 US1-080119 8/1/2019 WS
	Units									
Aroclor 1232	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1242	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1248	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1254	µg/kg	--	--	--	--	--	--	--	58.2 J	--
Aroclor 1260	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1262	µg/kg	--	--	--	--	--	--	--	105 U	--
Aroclor 1268	µg/kg	--	--	--	--	--	--	--	105 U	--
Total PCB Aroclors (reported, not calculated)	µg/kg	--	--	--	--	--	--	--	58.2 J	--
Total PCB Aroclors (U = 1/2)	µg/kg	--	--	--	--	--	--	--	478.2 J	--
Total PCB Aroclors (U = 0)	µg/kg	--	--	--	--	--	--	--	58.2 J	--
PCB Aroclors										
Aroclor 1016	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1221	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1232	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1242	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1248	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1254	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1260	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1262	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Aroclor 1268	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Total PCB Aroclors (reported, not calculated)	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Total PCB Aroclors (U = 1/2)	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Total PCB Aroclors (U = 0)	µg/L	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	0.25 U	--	0.25 U
Total Petroleum Hydrocarbons										
Total petroleum hydrocarbons (C9-C44)	mg/kg	--	--	--	--	--	--	--	314	--

- Notes:
- 1 U = compound analyzed, but not detected above detection limit
  - 2 UJ = compound analyzed, but not detected above estimated detection limit
  - 3 J = estimated value
  - 4 R = Rejected
  - 5 DUP = Duplicate sample
  - 6 -- = results not reported or not applicable
  - 7 µg/L = micrograms per liter
  - 8 µg/kg - microgram per kilogram
  - 9 mg/L = millograms per liter
  - 10 pct = percent total solids
  - 11 WR = Surface water
  - 12 WSP = Seep water
  - 13 SE = Sediment
  - 14 Samples collected by Anchor QEA in July and August 2019.

# Appendix A

## Laboratory Analytical Report



# Final Report

## Brookhaven Landfill Site Evaluation: Sediment Sampling July 2019

Laboratory Request Number: E19-0423

Report Date – Date of Last Signature

---

### Testing Laboratory

3M Environment, Health, Safety, and Medical  
3M EHS Laboratory  
Building 260-5N-17  
Maplewood, MN 55144-1000

---

### Requester

Karie Blomquist  
3M EHS&M; Corporate Environmental Programs  
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224-2W-17

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## 3M EHS Laboratory

3M EHS Laboratory Manager: Brian T. Mader, Ph.D.  
3M Principal Analytical Investigator: Susan Wolf  
3M Report Author: Laura Harrington

### Analytical Report E19-0423

Brookhaven Landfill Site Evaluation: Sediment Sampling July 2019

Report Date: Date of Last Signature

## 1 Introduction/Summary

---

The 3M EHS Laboratory prepared and analyzed a sediment sample collected by GHD personnel from the Brookhaven Landfill site in Alabama. A total of one sediment was collected August 1<sup>st</sup>, 2019 and a travel blank was prepared July 8, 2019. Samples were delivered to the 3M EHS Laboratory on August 5, 2019, for the analysis of the analytes listed in Table 2 under laboratory project number E19-0423. Results apply to samples as received.

The laboratory's quality system has been audited and was found to be in conformance with the EPA GLPs (40 CFR 792) as well as ISO/IEC 17025:2017 by an independent assessment for applicable analytes. Many of the target analytes investigated in this study were not validated ISO/IEC 17025:2017 making all the results are not covered under our A2LA scope of accreditation.

The 3M EHS Laboratory extracted and analyzed the one sample and travel blank in duplicate to determine the average concentration of each analyte. The one sediment sample and the travel blank were prepared with laboratory matrix spikes (LMSs) by fortifying an aliquot of the sample with a known quantity of target analyte prior to extraction. In addition, all samples were fortified with stable isotope labeled internal standards (IS) to aid in data quality assessments.

Samples were prepared and analyzed for PFHxA, PFHpA, PFOA, PFNA, PFDA, PFUnA, PFDoA, PFTrA, PFTeDA, PFBS, PFHxS, PFOS, N-MeFOSAA, and N-EtFOSAA using method ETS-8-053.1 "Solvent Extraction and Gradient or Isocratic LC/MS/MS Analysis of Soils for C4-C12 Perfluorinated Carboxylic Acids, and Perfluorobutane Sulfonate, Perfluorohexane Sulfonate, Perfluorooctane Sulfonate and Perfluorooctane Sulfonamide (FOSA): Quantification Using Stable Isotope Labeled Internal Standards". Note: This method has not been validated for PFTrA, PFTeDA, N-MeFOSAA, and N-EtFOSAA but the use of quality controls provided sufficient evidence that the method worked for the analytes.

The average results of the quantitative analysis of duplicate sample preparations are summarized in Table 1. Results in Table 1 are reported in ng/g (dry wt.). All results for quality control samples prepared and analyzed with the samples are reported and discussed elsewhere in this report.



**Table 1. Sample Results Summary <sup>[1]</sup>**

Laboratory ID	Sample Description	Average Determined Concentration (ng/g; dry wt.)													
		PFHxA	PFHpA	PFOA	PFNA	PFDA	PFUnA	PFDaA	PFTTrA	PFTeDA	PFBS	PFHxS	PFOS	N-MeFOSAA	N-EtFOSAA
E19-0423-001	Trip Blank	<0.278	<0.696	<0.267	<0.139	<0.139	<0.278	<0.139	<0.0696	<0.0696	<0.139	<0.0696	<0.285	<0.0695	<0.139
%RPD Sample/Sample Dup		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
E19-0423-002	SED-080119	<0.358	<0.895	0.396	<0.179	<0.179	<0.358	0.192	<0.0895	<0.0895	0.377	0.144	3.77	<0.0804	0.287
%RPD Sample/Sample Dup		NA	NA	NC	NA	NA	NA	NC	NA	NA	22% <sup>[2]</sup>	23% <sup>[2]</sup>	22% <sup>[2]</sup>	NA	49% <sup>[2]</sup>

NA = Not Applicable, values below the lower limit of quantitation (LLOQ).

NC = Not Calculated, one value below the LLOQ.

[1] Samples were analyzed using internal standard calibration. The analytical data uncertainty associated with the reported results are as follows: PFHxA ± 11%, PFHpA ± 18%, PFOA ± 19%, PFNA ± 14%, PFDA ± 20%, PFUnA 17%, PFDaA 10%, PFTTrA 26%, PFTeDA 8.8%, PFBS 28%, PFHxS 28%, PFOS 20%, N-MeFOSAA, 14%, N-EtFOSAA 14%.

[2] Sample/sample duplicate RPD did not meet acceptance criteria of ≤20%. Individual sample / sample duplicate results are provided in Section 4 of the report.

## 2 Methods - Analytical and Preparatory

### 2.1 Methods

Analysis was completed following 3M EHS Laboratory method ETS-8-053.1 "Solvent Extraction and Gradient or Isocratic LC/MS/MS Analysis of Soils for C4-C12 Perfluorinated Carboxylic Acids, and Perfluorobutane Sulfonate, Perfluorohexane Sulfonate, Perfluorooctane Sulfonate and Perfluorooctane Sulfonamide (FOSA): Quantification Using Stable Isotope Labeled Internal Standards".

**Table 2. Target Analyte List**

Target Analyte	Acronym	Internal Standards (IS)	Acronym
Perfluorohexanoic Acid (C6 Acid)	PFHxA	<sup>13</sup> C <sub>2</sub> -Perfluorohexanoic acid	[ <sup>13</sup> C <sub>2</sub> ]-PFHxA
Perfluoroheptanoic Acid (C7 Acid)	PFHpA	<sup>13</sup> C <sub>4</sub> -Perfluoroheptanoic acid	[ <sup>13</sup> C <sub>4</sub> ]-PFHpA
Perfluorooctanoic Acid (C8 Acid)	PFOA	<sup>13</sup> C <sub>8</sub> -Perfluorooctanoic acid	[ <sup>13</sup> C <sub>8</sub> ]-PFOA
Perfluorononanoic Acid (C9 Acid)	PFNA	<sup>13</sup> C <sub>9</sub> -Perfluorononanoic acid	[ <sup>13</sup> C <sub>9</sub> ]-PFNA
Perfluorodecanoic Acid (C10 Acid)	PFDA	<sup>13</sup> C <sub>6</sub> -Perfluorodecanoic acid	[ <sup>13</sup> C <sub>6</sub> ]-PFDA
Perfluoroundecanoic Acid (C11 Acid)	PFUnA	<sup>13</sup> C <sub>7</sub> -Perfluoroundecanoic acid	[ <sup>13</sup> C <sub>7</sub> ]-PFUnA
Perfluorododecanoic Acid (C12 Acid)	PFDoA	<sup>13</sup> C <sub>2</sub> -Perfluorododecanoic acid	[ <sup>13</sup> C <sub>2</sub> ]-PFDoA
Perfluorotridecanoic Acid (C13 Acid)	PFTra		
Perfluorotetradecanoic Acid (C14 Acid)	PFTeDA	<sup>13</sup> C <sub>2</sub> -Perfluorotetradecanoic acid	[ <sup>13</sup> C <sub>2</sub> ]-PFTeDA
Perfluorobutanesulfonate (C4 Sulfonate)	PFBS	<sup>18</sup> O <sub>2</sub> -Perfluorobutane sulfonate	[ <sup>18</sup> O <sub>2</sub> ]-PFBS
Perfluorohexanesulfonate (C6 Sulfonate)	PFHxS	<sup>13</sup> C <sub>3</sub> -Perfluorohexane Sulfonate	[ <sup>13</sup> C <sub>3</sub> ]-PFHS
Perfluorooctanesulfonate (C8 Sulfonate)	PFOS	<sup>13</sup> C <sub>8</sub> -Perfluorooctane Sulfonate	[ <sup>13</sup> C <sub>8</sub> ]-PFOS
N-methyl perfluorooctane sulfonamidoacetic acid	N-MeFOSAA	d3-methyl perfluorooctane sulfonamidoacetic acid	d3-MeFOSAA
N-ethyl perfluorooctane sulfonamidoacetic acid	N-EtFOSAA	d5-ethyl perfluorooctane sulfonamidoacetic acid	d5-EtFOSAA

### 2.2 Sample Collection

The sample was collected on August 1, 2019 in a Nalgene™ (high-density polyethylene) bottle. One collected sample and one travel blank were received by the 3M EHS Laboratory on August 5, 2019.

### 2.3 Sample Preparation

All samples were prepared following the extraction procedure defined in method ETS-8-053.1. In summary, a 1 cubic centimeter (cc) volume of sample aliquot (typically ~1 gram) was removed from each sample bottle using a fixed volume 1 cc spoon, followed by accurate weight determination. Each sample was prepared in duplicate for determination of average target analyte concentration. A 1 cc aliquot of the bulk sample was taken and fortified with known quantities of target analyte as a laboratory matrix spike (LMS) for recovery determinations. The target level fortified was 0.5-20 times the endogenous analyte level for samples above the LLOQ. All LMS results are reported.

Each sample aliquot was fortified with a fixed quantity (nominal 3 ng/cc) of stable isotope labeled internal standard. Then 8 mL of 4:1 acetonitrile:water extraction solution was added and the samples were vortex mixed. Samples were sonicated for 1 hour, followed by centrifugation for 10 minutes at a setting of 3000 RPM. An aliquot of the clear supernatant was transferred to an autovial for LC/MS/MS analysis. Dry weights were determined following ETS-8-083.0.



## 2.4 Analysis

All samples and quality control samples were analyzed for the target analyte using high performance liquid chromatography/tandem mass spectrometry (HPLC/MS/MS). Pertinent instrument parameters, the liquid chromatography gradient program, and the specific mass transitions analyzed are described in the tables below.

Due to the nature of the samples, the wide range of concentrations found in the samples, and the environmental occurrence of multiple isomers of the laboratory's analytes of interest, the software used for processing the analytical results is not able to consistently integrate the analytical peak; therefore, manual integration of the analytical peak is necessary. All manual integrations are performed following the procedures outlined in method ETS-12-010.2. The consistency of the laboratory's integration is ensured through the training of laboratory personnel, the peer review process required for all manual integrations, the review of manual integrations by the QAU, and where necessary the review of manual integrations by laboratory management.

**Table 3. Instrument Parameters.**

<b>Instrument Name</b>	<b>ETS Xavier</b>
<b>Liquid Chromatograph</b>	Agilent 1260
<b>Analysis Method</b>	ETS-8-053.1
<b>Analysis Date</b>	8/7/19
<b>Pre-Guard column</b>	Prism RP (2 mm X 50 mm), 5 µm
<b>Analytical column</b>	Betasil C18 (4.6 mm X 100 mm), 5 µm
<b>Injection Volume</b>	25 µL
<b>Mass Spectrometer</b>	AB Sciex Triple Quad 5500
<b>Ion Source</b>	Turbo Spray
<b>Polarity</b>	Negative
<b>Software</b>	Analyst 1.6.3

**Table 4. Liquid Chromatography Gradient Program.**

<b>ETS-8-053.1<sup>[1]</sup></b>				
<b>Step Number</b>	<b>Total Time (min)</b>	<b>Flow Rate (µL/min)</b>	<b>Percent A (2 mM ammonium acetate)</b>	<b>Percent B (Acetonitrile)</b>
0	0.00	700	97.0	3.0
1	1.50	700	97.0	3.0
2	2.00	700	70.0	30.0
3	6.00	700	40.0	60.0
4	7.50	700	10.0	90.0
5	8.50	700	10.0	90.0
6	10.5	700	97.0	3.0
7	12.0	700	97.0	3.0

[1]Analytical method described is not provided in ETS-8-053.1, but method allows for changes to the columns and gradient program. Method used was created under E19-0390.

**Table 5. Mass Transitions <sup>[1]</sup>**

Analyte	Mass Transition Q1/Q3	Internal Standard	Mass Transition Q1/Q3
PFHxA	313/269	<sup>[13]C</sup> <sub>2</sub> -PFHxA	315/270
	313/119		
PFHpA	363/319	<sup>[13]C</sup> <sub>4</sub> -PFHpA	367/322
	363/119		
PFOA	413/369	<sup>[13]C</sup> <sub>8</sub> -PFOA	421/376
	413/219		
	413/169		
PFNA	463/419	<sup>[13]C</sup> <sub>9</sub> -PFNA	472/427
	463/169		
	463/219		
PFDA	513/469	<sup>[13]C</sup> <sub>6</sub> -PFDA	519/474
	513/219		
	513/269		
PFUnA	563/519	<sup>[13]C</sup> <sub>7</sub> -PFUnA	570/525
	563/269		
	563/219		
PFDoA	613/569	<sup>[13]C</sup> <sub>2</sub> -PFDoA	615/570
	613/319		
	613/269		
PFTrA	663/619	<sup>[13]C</sup> <sub>2</sub> -PFDoA	615/570
	663/269		
	663/219		
PFTeDA	713/669	<sup>[13]C</sup> <sub>2</sub> -PFTeDA	715/670
PFBS	299/80	<sup>[18]O</sup> <sub>2</sub> -PFBS	303/84
	299/99		
PFHS	399/99	<sup>[13]C</sup> <sub>3</sub> -PFHS	402/80
	399/80		
PFOS	499/99	<sup>[13]C</sup> <sub>8</sub> -PFOS	507/80
	499/80		
	499/130		
N-MeFOSAA	570/169	d3-MeFOSAA	573/169
	570/83		573/83
	570/219		573/219
N-EtFOSAA	584/169	d5-EtFOSAA	589/169
	584/83		589/83
	584/219		589/219

[1] Scheduled MRM method was used. The individual transitions were summed to produce a "total ion chromatogram" (TIC), which was used for quantitation.



## 3 Data Analysis

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### 3.1 Calibration

Samples were analyzed against a matrix-matched stable isotope internal standard calibration curve. Calibration standards were prepared in a similar manner to the samples by spiking known amounts of stock solutions into 1 cc of the control soil matrix. The calibration standards contained an internal standard mix at a nominal concentration of 3.0 ng/cc. A total of fourteen calibration standards ranging from 0.05 ng/cc to 500 ng/cc (nominal) were analyzed.

A quadratic, 1/x weighted, calibration curve of the ratio of the standard peak area counts over the internal standard peak area counts was used to fit the data for each analyte. The data were not forced through zero during the fitting process. Calculating the standard concentrations using the peak area ratios and the resultant calibration curve confirmed accuracy of each curve point. The reference standards of PFOA and PFOS used to prepare the calibration standards consisted of both linear and branched isomers.

Each curve point was quantitated using the overall calibration curve and reviewed for accuracy. Method calibration accuracy requirements of  $100\pm 30\%$  ( $100\pm 35\%$  for the lowest curve point) were met for all analytes used to generate the calibration curve. The correlation coefficient (r) was greater than 0.995 for all analytes.

### 3.2 System Suitability

A calibration standard was analyzed three times at the beginning of the analytical sequence to demonstrate overall system suitability. The acceptance criteria for system suitability samples of less than or equal to 20% relative standard deviation (RSD) for peak area ratio and retention time criteria of less than or equal to 5% RSD were met for all analytes.

### 3.3 Limit of Quantitation (LOQ)

The LOQ as defined in method ETS-8-053.1 is the lowest non-zero calibration standard in the curve that meets linearity and accuracy requirements and for which the area counts are at least twice those of the appropriate blanks. The LOQs associated with the sample analysis are listed in the Table 6 below.

**Table 6. LOQ**

Analyte	Analysis on 8/7/19 LOQ, ng/cc
PFHxA	<0.200
PFHpA	<0.500
PFOA	<0.192
PFNA	<0.100
PFDA	<0.100
PFUnA	<0.200
PFDoA	<0.100
PFTTrA	<0.0500
PFTeDA	<0.0500
PFBS	<0.100
PFHS	<0.0500
PFOS	<0.185
N-MeFOSAA	<0.0499
N-EtFOSAA	<0.0998

### 3.4 Continuing Calibration

During the course of the analytical sequence, continuing calibration verification samples (CCVs) were analyzed to confirm that the instrument response and the initial calibration curve were still in control. All reported results were bracketed by CCVs that met method acceptance criteria of 100%±30%.

### 3.5 Blanks

Two types of blanks were prepared and analyzed with the samples: method blanks and extraction solvent blanks. Method blanks were prepared using the same soil matrix as the calibration curve, TCR-453, and extracted with and without internal standard. Each method blank result was reviewed and used to evaluate method performance to determine the LOQ for each analyte.

### 3.6 Lab Control Spikes (LCSs)

Low, mid and high lab control spikes were prepared for the target analytes and analyzed in triplicate. LCSs were prepared by spiking known amounts of the analytes into 1 cc of control soil matrix to produce the desired concentration. The LCSs were then extracted in the same manner as the samples. Method ETS-8-053.1 states that the average recovery of LCSs at each spiking level must be within 70%-130% with an overall RSD of ≤20% for all LCSs. All LCS samples met method acceptance criteria except for the high LCSs for PFBS, PFHS and PFOS. All three high (100 ng/cc) LCSs for these analytes recovered high due to the following reasons: either suppressed internal standard, interference from PFTeDA or PFTeDA internal standard, and/or results were above the upper limit of quantitation (ULOQ). As the values determined for the samples were not relevant to the LCSs and all Lab Matrix Spikes (LMSs) passed, and the method, ETS-8-053.1, only recommends, it does not require, that three levels of LCSs be prepared, the results were still reported. Failing LCSs were still used to determine analytical method uncertainty. The LCSs for PFTeDA and N-MeFOSAA did not have an expected range of results at the 95% confidence level that included 100% per ETS-12-012.5. As the LCSs results met all ETS-8-053.1 method criteria, the results were not biased corrected.

The batch LCS recovery results were reviewed when evaluating the analytical method uncertainty in section 3.7 of the report.



The following calculations were used to generate data in Table 7.

$$\text{LCS Percent Recovery} = \frac{\text{Calculated Concentration}}{\text{Spike Concentration}} \times 100\%$$

$$\text{LCS \%RSD} = \frac{\text{Standard Deviation of LCS Replicates}}{\text{Average LCS Recovery}} \times 100\%$$

**Table 7. LCS Recoveries**

Lab ID	PFHxA			PFHpA		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	1.00	0.961	96.1%	1.00	1.17	117%
LCS-190807-02	1.00	1.00	100%	1.00	1.05	105%
LCS-190807-03	1.00	0.980	98.0%	1.00	1.21	121%
LCS-190807-04	10.0	9.56	95.6%	10.0	10.2	102%
LCS-190807-05	10.0	9.20	92.0%	10.0	9.05	90.5%
LCS-190807-06	10.0	9.20	92.0%	10.0	9.19	91.9%
LCS-190807-07	100	102	102%	100	102	102%
LCS-190807-08	100	103	103%	100	122	122%
LCS-190807-09	100	107	107%	100	99.5	100%
<b>Overall Average ± %RSD</b>	<b>98.4% ± 5.2%</b>			<b>106% ± 11%</b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.

Table 7 continued. LCS Recoveries

Lab ID	PFOA			PFNA		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	0.958	1.02	106%	1.00	0.962	96.2%
LCS-190807-02	0.958	0.874	91.2%	1.00	1.07	107%
LCS-190807-03	0.958	1.01	105%	1.00	1.03	103%
LCS-190807-04	9.58	9.81	102%	10.0	9.69	96.9%
LCS-190807-05	9.58	8.95	93.4%	10.0	9.51	95.1%
LCS-190807-06	9.58	8.18	85.4%	10.0	9.89	98.9%
LCS-190807-07	95.8	98.0	102%	100	95.6	95.6%
LCS-190807-08	95.8	95.8	100%	100	101	101%
LCS-190807-09	95.8	82.9	86.5%	100	90.0	90.0%
<b>Overall Average ± %RSD</b>	<b>97.0% ± 8.3%</b>			<b>98.2% ± 5.1%</b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.



Table 7 continued. LCS Recoveries

Lab ID	PFDA			PFUnA		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	1.00	0.978	97.8%	1.00	0.988	98.8%
LCS-190807-02	1.00	1.05	105%	1.00	1.10	110%
LCS-190807-03	1.00	1.09	109%	1.00	1.17	117%
LCS-190807-04	10.0	8.71	87.1%	10.0	8.99	89.9%
LCS-190807-05	10.0	9.16	91.6%	10.0	8.80	88.0%
LCS-190807-06	10.0	8.63	86.3%	10.0	9.53	95.3%
LCS-190807-07	100	111	111%	100	108	108%
LCS-190807-08	100	105	105%	100	108	108%
LCS-190807-09	100	116	116%	100	97.6	97.6%
<b>Overall Average ± %RSD</b>	<b>101% ± 11%</b>			<b>101% ± 9.7%</b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.

Table 7 continued. LCS Recoveries

ETS-8-053.1 Internal Standard Calibration Analyzed 8/7/19		PFDoA			PFTrA		
Lab ID	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	
LCS-190807-01	1.00	0.909	90.9%	1.00	0.978	97.8%	
LCS-190807-02	1.00	1.01	101%	1.00	1.01	101%	
LCS-190807-03	1.00	1.05	105%	1.00	1.08	108%	
LCS-190807-04	10.0	8.37	83.7%	10.0	8.70	87.0%	
LCS-190807-05	10.0	9.11	91.1%	10.0	9.05	90.5%	
LCS-190807-06	10.0	9.61	96.1%	10.0	9.12	91.2%	
LCS-190807-07	100	111	111%	100	122	122%	
LCS-190807-08	100	104	104%	100	114	114%	
LCS-190807-09	100	111	111%	100	106	106%	
<b>Overall Average ± %RSD</b>	<b>99.3% ± 9.6%</b>			<b>102% ± 11%</b>			

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.



Table 7 continued. LCS Recoveries

ETS-8-053.1 Internal Standard Calibration Analyzed 8/7/19	PFTeDA			PFBS		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	1.00	0.805	80.5%	1.00	0.781	78.1%
LCS-190807-02	1.00	0.808	80.8%	1.00	0.755	75.5%
LCS-190807-03	1.00	0.809	80.9%	1.00	0.719	71.9%
LCS-190807-04	10.0	8.18	81.8%	10.0	9.21	92.1%
LCS-190807-05	10.0	7.11	71.1%	10.0	9.00	90.0%
LCS-190807-06	10.0	7.80	78.0%	10.0	9.41	94.1%
LCS-190807-07	100	82.9	82.9%	100	147	147% <sup>[1]</sup>
LCS-190807-08	100	79.6	79.6%	100	155	155% <sup>[1]</sup>
LCS-190807-09	100	84.8	84.8%	100	125	125% <sup>[1]</sup>
<b>Overall Average ± %RSD</b>	<b>80.0% ± 4.8%</b>			<b>103% ± 30%<sup>[2]</sup></b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.

Table 7 continued. LCS Recoveries

Lab ID	PFHxS			PFOS		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	1.00	0.894	89.4%	0.927	0.771	83.2%
LCS-190807-02	1.00	0.938	93.8%	0.927	0.685	73.9%
LCS-190807-03	1.00	0.816	81.6%	0.927	0.612	66.0% <sup>[3]</sup>
LCS-190807-04	10.0	10.7	107%	9.27	8.79	94.8%
LCS-190807-05	10.0	10.2	102%	9.27	9.13	98.5%
LCS-190807-06	10.0	10.4	104%	9.27	9.45	105%
LCS-190807-07	100	144	144% <sup>[1]</sup>	92.7	NR	NR
LCS-190807-08	100	151	151% <sup>[1]</sup>	92.7	NR	NR
LCS-190807-09	100	138	138% <sup>[1]</sup>	92.7	NR	NR
<b>Overall Average ± %RSD</b>	<b>112% ± 23%<sup>[2]</sup></b>			<b>86.4% ± 17%</b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of ≤30%, LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of ≤20%. Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of ≤30%, as at least 2/3 reported LCSs did meet method criteria data still reported.



Table 7 continued. LCS Recoveries

Lab ID	N-MeFOSAA			N-EtFOSAA		
	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery	Spiked Concentration (ng/cc)	Calculated Concentration (ng/cc)	% Recovery
LCS-190807-01	1.00	0.901	90.1%	1.00	0.920	92.9%
LCS-190807-02	1.00	0.932	93.2%	1.00	0.963	96.3%
LCS-190807-03	1.00	0.994	99.4%	1.00	0.903	90.3%
LCS-190807-04	10.0	8.84	88.4%	10.0	9.93	99.3%
LCS-190807-05	10.0	8.83	88.3%	10.0	9.24	92.4%
LCS-190807-06	10.0	8.58	85.8%	10.0	8.81	88.1%
LCS-190807-07	100	87.1	87.1%	100	107	107%
LCS-190807-08	100	96.8	96.8%	100	99.5	99.5%
LCS-190807-09	100	98.6	98.6%	100	106	106%
<b>Overall Average <math>\pm</math> %RSD</b>	<b>92.0% <math>\pm</math> 5.6%</b>			<b>96.8% <math>\pm</math> 7.0%</b>		

NR = Not Reported, values above the ULOQ.

[1] Percent recovery did not meet method criteria of  $\leq 30\%$ , LCS level not relevant to samples, all results reported.

[2] RSD did not meet method criteria of  $\leq 20\%$ . Average of 6 passing LCSs RSDs met method criteria: PFBS (11%), and PFHS (10%).

[3] Percent recovery did not meet method criteria of  $\leq 30\%$ , as at least 2/3 reported LCSs did meet method criteria data still reported.

### 3.7 Analytical Data Uncertainty

Analytical uncertainty is based on historical QC data that is control charted and used to evaluate method accuracy and precision. The method uncertainty is calculated following ETS-12-012.5. The standard deviation is calculated for the set of accuracy results (in %) obtained for the QC samples. For target analytes PFHxA, PFHpA, PFOA, PFNA, PFDA, PFUnA, PFDoA, PFBS, PFHS and PFOS, the most recent fifty QC samples were used. For target analytes N-MeFOSAA and N-EtFOSAA the most recent twenty QC samples were used. For target analytes PFTrA and PFTeDA the most recent nine QC samples were used. The expanded uncertainty is calculated by multiplying the standard deviation by a factor of 2 (50 points), 2.085963 (20 points) and 2.262157 (9 points), which corresponds to a confidence level of 95%.

When determining the analytical data uncertainty assigned to the sample results in Table 1, in addition to the analytical method uncertainty, the batch LCS samples prepared with the project samples and sample QC data are also reviewed. The analytical data uncertainty is listed in Table 8.

**Table 8. Analytical Data Uncertainty.**

Analyte	Calibration Method	Standard Deviation (%)	Analytical Data Uncertainty
PFHxA	Internal	5.7%	11% (n=50)
PFHpA	Internal	9.1%	18% (n=50)
PFOA	Internal	9.7%	19% (n=50)
PFNA	Internal	7.1%	14% (n=50)
PFDA	Internal	10%	20% (n=50)
PFUnA	Internal	8.3%	17% (n=50)
PFDoA	Internal	5.1%	10% (n=50)
PFTTrA	Internal	12%	26% (n=9)
PFTeDA	Internal	3.9%	8.8% (n=9)
PFBS	Internal	14%	28% (n=50)
PFHxS	Internal	14%	28% (n=50)
PFOS	Internal	10%	20% (n=50)
N-MeFOSAA	Internal	6.8%	14% (n=20)
N-EtFOSAA	Internal	6.8%	14% (n=20)

### 3.8 Laboratory Matrix Spikes (LMS)

A laboratory matrix spike sample was prepared for the one sediment and travel blank to verify that the analytical method is applicable for the collected matrix. Laboratory matrix spikes are generated by adding a measured volume of target analyte solution to an aliquot of the field sample following sample collection. Laboratory matrix spikes must be at least 0.5 times the analyte concentration to be considered an appropriate spike level. Samples were initially screened to determine appropriate LMSs levels. Laboratory matrix spike recoveries within method acceptance criteria of 100±30% confirm that “unknown” components in the sample matrix do not significantly interfere with the extraction and analysis of the analytes of interest. The standards used for the preparation of the field matrix spiking solutions contained reference materials comprised of both linear and branched isomers for PFOA and PFOS. Laboratory matrix spikes are presented in section 4 of this report. All LMSs spiked 0.5-20 times the measurable endogenous analyte concentration met method criteria. The travel blank was spiked at nominal 2 ng/cc for all analytes and SED-080119 was spiked at nominal 4 ng/cc.

The following calculation was used to generate data in section 4.

$$\text{LMS Recovery} = \frac{(\text{Determined Concentration of LMS} - \text{Determined Concentration of Field Sample})}{\text{Spike Concentration}} * 100\%$$

## 4 Data Summary and Discussion

The tables below summarize the sample results and laboratory matrix spike recoveries for two samples. The table provides the average concentration and the relative percent difference (%RPD) of the sample and sample duplicate. Results and average values are rounded to three significant figures. Relative percent difference (%RPD) values are rounded to two significant figures. Because of rounding, values vary slightly from those listed in the raw data. Laboratory matrix spikes meeting the



method acceptance criteria of  $\pm 30\%$  demonstrate that the method is appropriate for the given matrix. All method criteria were met except for the following:

**08/07/19 Analysis:** Sample SED-080119 had RPD value for PFBS (22%), PFHxS (23%), PFOS (22%) and N-EtFOSAA (49%) outside method acceptance criteria of  $\leq 20\%$ . As sample values were all near the LLOQ, results were reported.

**Table 9. Travel Blank**

Laboratory ID	Sample ID	PFHxA		PFHpA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.278	NA	<0.696	NA
E19-0423-001-rep 2	Travel Blank	<0.270	NA	<0.674	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.50	90.0%	2.55	92.0%
Average Concentration (dry wt.) $\pm$ % RPD		<0.278 ng/g		<0.696 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	PFOA		PFNA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.267	NA	<0.139	NA
E19-0423-001-rep 2	Travel Blank	<0.259	NA	<0.135	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.21	82.8%	2.77	100%
Average Concentration (dry wt.) $\pm$ % RPD		<0.267 ng/g		<0.139 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	PFDA		PFUnA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.139	NA	<0.278	NA
E19-0423-001-rep 2	Travel Blank	<0.135	NA	<0.270	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.57	92.5%	2.82	102%
Average Concentration (dry wt.) $\pm$ % RPD		<0.139 ng/g		<0.278 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	PFD <sub>o</sub> A		PFTrA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.139	NA	<0.0696	NA
E19-0423-001-rep 2	Travel Blank	<0.135	NA	<0.0674	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.58	93.0%	2.48	89.5%
Average Concentration (dry wt.) ± % RPD		<0.139 ng/g		<0.0696 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	PFTeDA		PFBS	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.0696	NA	<0.139	NA
E19-0423-001-rep 2	Travel Blank	<0.0674	NA	<0.135	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.02	73.0%	2.59	93.5%
Average Concentration (dry wt.) ± % RPD		<0.0696 ng/g		<0.139 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	PFH <sub>x</sub> S		PFOS	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.0696	NA	<0.285	NA
E19-0423-001-rep 2	Travel Blank	<0.0674	NA	<0.249	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	3.30	119%	2.33	90.8%
Average Concentration (dry wt.) ± % RPD		<0.0696 ng/g		<0.285 ng/g	

NA = Not Applicable

**Table 9 continued. Travel Blank**

Laboratory ID	Sample ID	N-MeFOSAA		N-EtFOSAA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-001-rep 1	Travel Blank	<0.0695	NA	<0.139	NA
E19-0423-001-rep 2	Travel Blank	<0.0673	NA	<0.135	NA
E19-0423-001-LMS	Travel Blank-2 ng LMS	2.59	93.5%	2.57	92.5%
Average Concentration (dry wt.) ± % RPD		<0.0695 ng/g		<0.139 ng/g	

NA = Not Applicable



**Table 10. SED-080119**

Laboratory ID	Sample ID	PFHxA		PFHpA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	<0.358	NA	<0.895	NA
E19-0423-002-rep 2	SED-080119	<0.333	NA	<0.833	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	6.78	89.0%	7.40	97.3%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>&lt;0.358 ng/g</b>		<b>&lt;0.895 ng/g</b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

**Table 10 continued. SED-080119**

Laboratory ID	Sample ID	PFOA		PFNA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	<0.344	NA	<0.179	NA
E19-0423-002-rep 2	SED-080119	0.396	NA	<0.167	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	8.34	109%	7.10	93.3%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>0.396 ng/g ± NC</b>		<b>&lt;0.179 ng/g</b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

**Table 10 continued. SED-080119**

Laboratory ID	Sample ID	PFDA		PFUnA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	<0.179	NA	<0.358	NA
E19-0423-002-rep 2	SED-080119	<0.167	NA	<0.333	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	7.10	93.3%	7.33	96.3%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>&lt;0.179 ng/g</b>		<b>&lt;0.358 ng/g</b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

**Table 10 continued. SED-080119**

Laboratory ID	Sample ID	PFDoA		PFTra	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	0.192	NA	<0.0895	NA
E19-0423-002-rep 2	SED-080119	<0.167	NA	<0.0833	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	7.50	96.0%	8.47	111%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>0.192 ng/g ± NC</b>		<b>&lt;0.0895 ng/g</b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

**Table 10 continued. SED-080119**

Laboratory ID	Sample ID	PFTeDA		PFBS	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	<0.0895	NA	0.335	NA
E19-0423-002-rep 2	SED-080119	<0.0833	NA	0.420	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	5.84	75.6%	7.18	89.3%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>&lt;0.0895 ng/g</b>		<b>0.377 ng/g ± 22%<sup>[1]</sup></b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

**Table 10 continued. SED-080119**

Laboratory ID	Sample ID	PFHxS		PFOS	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	0.127	NA	3.35	NA
E19-0423-002-rep 2	SED-080119	0.161	NA	4.20	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	8.74	113%	10.7	98.3%
<b>Average Concentration (dry wt.) ± % RPD</b>		<b>0.144 ng/g ± 23%<sup>[1]</sup></b>		<b>3.77 ng/g ± 22%<sup>[1]</sup></b>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.



Table 10 continued. SED-080119

Laboratory ID	Sample ID	N-MeFOSAA		N-EtFOSAA	
		Concentration (ng/g (dry wt.))	% Recovery	Concentration (ng/g (dry wt.))	% Recovery
E19-0423-002-rep 1	SED-080119	<0.0804	NA	0.217	NA
E19-0423-002-rep 2	SED-080119	<0.0748	NA	0.358	NA
E19-0423-002-LMS	SED-080119-4 ng LMS	7.25	95.5%	7.96	101%
Average Concentration (dry wt.) ± % RPD		<0.0804 ng/g		0.287 ng/g ± 49% <sup>[1]</sup>	

NA = Not Applicable

NC= Not Calculated, one value below the LLOQ.

[1] RPD did not meet method criteria of ≤20%.

#### 4.1 Percent Moisture Determination

Percent moisture data was used for calculating results on a dry weight basis and were determined from separate sample aliquots than those used for analysis. The percent moisture was determined in duplicate for each sample per ETS-8-083.0. In summary, each sample aliquot is accurately weighed to determine the “wet” weight. Then the aliquot is dried at 105°C until no further loss in mass occurs (assumed loss due to water evaporation), and then the dried weight is accurately determined. The first dry weight was determined >24 hours after being put in the oven, and the final dry weight was determined after an additional 1 hour in the oven. Note: samples were cooled to room temperature in ambient air, and not under a moisture free system. The average percent moisture and RPD of the duplicate determinations for each is reported in Table 11. The percent moisture was calculated by the following equation:

$$\text{Percent Moisture} = \frac{(\text{Original Soil Wet Mass} - \text{Dried Soil Mass})}{\text{Original Soil Wet Mass}} * 100\%$$

Table 11. Percent Moisture

Laboratory ID	Sample ID	Average Percent Moisture (%, w/w)	% RPD
E19-0423-001	Travel Blank	17.5%	1.4%
E19-0423-002	SED-080119	60.3%	2.4%

## 5 Conclusion

Laboratory control spikes were used to determine the analytical method accuracy and precision for all analytes. The accuracy and precision were then used to estimate the method uncertainty for the results. Laboratory matrix spike recoveries demonstrated that the analytical method was appropriate for the given sample matrix. Analysis was completed using 3M EHS Laboratory method ETS-8-053.1 “Solvent Extraction and Gradient or Isocratic LC/MS/MS Analysis of Soils for C4-C12 Perfluorinated Carboxylic Acids, and Perfluorobutane Sulfonate, Perfluorohexane Sulfonate, Perfluorooctane Sulfonate and Perfluorooctane Sulfonamide (FOSA): Quantification Using Stable Isotope Labeled Internal Standards”. Analytical results are reported in Tables 1 and 9-10 of this report.

## 6 Data / Sample Retention

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All remaining sample and associated project data (hardcopy and electronic) will be archived according to 3M EHS Laboratory standard operating procedures.

## 7 Attachments

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Chain of Custody Form

## 8 Signatures


---



Digitally signed by Laura M. Harrington  
DN: c=US, st=MN, l=St. Paul, o=3M, ou=EHS Laboratory,  
cn=Laura M. Harrington, email=lharrington@mmm.com  
Reason: I am the author of this document  
Date: 2019.08.30 10:55:43 -05'00'

---

Laura Harrington, 3M Report Author



Digitally signed by Susan T. Wolf  
DN: c=US, st=MN, l=St. Paul, o=3M, ou=EHS Laboratory,  
cn=Susan T. Wolf, email=stwolf@mmm.com  
Reason: I have reviewed this document  
Date: 2019.09.05 19:35:27 -05'00'

---

Susan T. Wolf, 3M Principal Analytical Investigator



Digitally signed by Brian T. Mader  
DN: c=US, st=MN, l=St. Paul, o=3M, ou=EHS Laboratory,  
cn=Brian T. Mader, email=bmader@mmm.com  
Reason: I have reviewed this document  
Date: 2019.09.04 13:50:30 -05'00'

---

Brian T. Mader, Ph.D., 3M EHS Laboratory Manager

The 3M EHS Laboratory's Quality Assurance Unit has audited the data and report for this project.



Digitally signed by Kent R. Lindstrom  
Reason: I agree to the terms defined by the  
placement of my signature on this document  
Date: 2019.08.30 13:57:19 -05'00'

---

Quality Assurance Representative

***This test report shall not be reproduced except in full, without written approval of the 3M EHS Laboratory.***



## Form 38778 - A - PWO

Telephone:  
Sample Receiving: (651) 736-6559  
Alternate: (651) 733-9873  
FAX: (651) 733-5982

17457

3M Env. Lab Project #  
For Internal Use Only

Project ID/Project Name	Brookhaven Landfill - Sediment	
Template #		Final Report Due Date
Project Lead	GMO	Internal Due Date
Dept. # (main)	530711	Class/Job/Project #

69-0423

<b>Report Results to:</b>	Contact Name <u>Katie Blomquist</u>	Date Available							
	Company <u>3M EHS</u>	Date Due							
	Mailing Address <u>224 SW 17</u>	Contract Lab							
	City, State, Zip <u>3M Center</u>								
	Telephone # <u>737-3477</u>	FAX #							

<b>Special Instructions and/or Specific Regulatory Requirements:</b> (method, limit of detection, reporting units, etc.)						<b>Preservatives:</b>					Total Number of Containers	<b>Analysis Requested:</b> Complete below. Attach any associated information.				
						HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	VOCs	None	Other						
						Enter the number of containers of each						(Enter an 'X' in the box below to indicate request)				

Item #	Client Sample Identification	3M LIMS#	Date Sampled	Time Sampled	Matrix/Media						
1.	<u>Travel Blank</u>	<u>-001</u>	<u>7/8/19</u>	<u>1405</u>	<u>S</u>					<input checked="" type="checkbox"/>	1
2.	<u>SED-08019</u>	<u>002</u>	<u>8/1/19</u>	<u>1620</u>	<u>SED</u>					<input checked="" type="checkbox"/>	1
3.											
4.											
5.											
6.											
7.											
8.											
9.											
10.											

<b>Chain of Custody</b>	Collected by (print):					Collector's signature:				
	Item #	Relinquished by/Affiliation	Time	Date	Shipped Via:	Received by/Affiliation	Time	Date		
		<u>Pick Corp Anchor OEA</u>	<u>1630</u>	<u>8/2/19</u>	<u>Fedex</u>	<u>JOEPA TILMAN</u>	<u>3M</u>	<u>12:52pm</u>	<u>8-5-19</u>	

Sample Condition Upon Receipt: <input checked="" type="checkbox"/> Acceptable <input type="checkbox"/> Other: Temperature: <u>4</u> °C <input checked="" type="checkbox"/> Received on Ice Other Associated CoCs:	Comments:
---	-----------



## ANALYTICAL REPORT

Lab Number:	L1934250
Client:	Anchor QEA, LLC 1201 3rd Ave Suite 2600 Seattle, WA 98101
ATTN:	Cindy Fields
Phone:	(818) 422-4820
Project Name:	DECATUR AL-MEYERS BROWN
Project Number:	190780-01.01
Report Date:	08/15/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

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Eight Walkup Drive, Westborough, MA 01581-1019  
508-898-9220 (Fax) 508-898-9193 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)





**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1934250-01	BHC1-073119	LEACHATE	ALABAMA	07/31/19 10:37	08/01/19
L1934250-02	BHC2-073119	LEACHATE	ALABAMA	07/31/19 12:25	08/01/19
L1934250-03	BHC3-073119	LEACHATE	ALABAMA	07/31/19 14:14	08/01/19
L1934250-04	BHC3-073119FD	LEACHATE	ALABAMA	07/31/19 14:35	08/01/19

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

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**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L1934250-03: The container(s) for the Dissolved Organic Carbon - EPA 9060A analysis were received broken; however, there was adequate sample remaining to perform the requested analysis.

#### Volatile Organics

The WG1271817-6/-7 MS/MSD recoveries, performed on L1934250-03, are above the acceptance criteria for acetone (150%/150%); however, the associated LCS/LCSD recoveries are within overall method allowances. The results of the native sample are considered to have a potentially high bias for these compounds.

#### Semivolatile Organics

The WG1268587-2/-3 LCS/LCSD recoveries, associated with L1934250-01 through -04, are above the individual acceptance criteria for di-n-octylphthalate (142% LCSD only), p-chloro-m-cresol (119%/115%) and 4-nitrophenol (120%/120%), but within the overall method allowances. The results of the associated samples are reported; however, all positive detects are considered to have a potentially high bias for these compounds. The WG1268587-2 LCS recovery, associated with L1934250-01 through -04, is below the acceptance criteria for benzidine (2%); however, it has been identified as a "difficult" analyte. The results of the associated samples are reported.

The WG1268587-2/-3 LCS/LCSD RPD, associated with L1934250-01 through -04, is above the acceptance criteria for benzidine (144%).

The WG1268587-4 MS recoveries, performed on L1934250-03, are outside the acceptance criteria for p-chloro-m-cresol (99%) and 4-nitrophenol (88%).

The WG1268587-5 MSD recovery, performed on L1934250-03, is outside the acceptance criteria for aniline (37%).

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Case Narrative (continued)

The WG1268587-4/-5 MS/MSD RPDs, performed on L1934250-03, are outside the acceptance criteria for hexachlorobenzene (31%), 2,4-dinitrotoluene (31%), fluoranthene (32%), nitrosodiphenylamine(ndpa)/dpa (31%), bis(2-ethylhexyl)phthalate (32%), di-n-butylphthalate (32%), di-n-octylphthalate (33%), dimethyl phthalate (32%), benzo(k)fluoranthene (32%), pyrene (32%), aniline (34%), 2-nitroaniline (32%), 4-nitroaniline (40%), p-chloro-m-cresol (32%), 2,4-dimethylphenol (36%), 4-nitrophenol (37%), 4,6-dinitro-o-cresol (32%), 3-methylphenol/4-methylphenol (31%), 2,4,5-trichlorophenol (32%) and carbazole (32%).

### Pesticides

L1934250-01, -02, -03, and -04: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

L1934250-01, -02, -03, and -04: Re-extractions were performed with the method required holding time exceeded.

L1934250-01: The surrogate recoveries were outside the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (29%) and decachlorobiphenyl (23%/19%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

L1934250-03: The surrogate recoveries were outside the acceptance criteria for decachlorobiphenyl (27%/23%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

WG1269345-1: Method Blank surrogate recoveries were outside the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (28%) and decachlorobiphenyl (20%/20%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

WG1269345-2: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (24%) , but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Case Narrative (continued)

The WG1269345-2 LCS recoveries, associated with L1934250-01, were below the acceptance criteria for endrin aldehyde (22%), endrin ketone (28%), 4,4'-ddt (28%), endosulfan ii (30%), endosulfan sulfate (29%) and methoxychlor (25%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported. All original results are considered to have a potentially low bias for these compounds.

The WG1269345-2/-3 LCS/LCSD RPD(s), associated with L1934250-01, are above the acceptance criteria for delta-bhc (87%), lindane (85%), alpha-bhc (86%), beta-bhc (80%), heptachlor (83%), aldrin (82%), heptachlor epoxide (83%), endrin (87%), endrin aldehyde (89%), endrin ketone (86%), dieldrin (87%), 4,4'-dde (88%), 4,4'-ddd (88%), 4,4'-ddt (92%), endosulfan i (85%), endosulfan ii (87%), endosulfan sulfate (91%), methoxychlor (93%), cis-chlordane (81%) and trans-chlordane (85%).

The WG1272024-2/-3 LCS/LCSD RPD, associated with L1934250-02 through -04, is above the acceptance criteria for beta-bhc (23%).

WG1269345-6: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (25%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

#### Herbicides

WG1269658-4: The surrogate recovery is outside the individual acceptance criteria for dcaa (373%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

WG1269658-5: The surrogate recovery is outside the individual acceptance criteria for dcaa (224%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1269658-5 MSD recovery, performed on L1934250-03, is above the acceptance criteria for mcpp (154%); however, the associated LCS/LCSD recoveries are within overall method allowances. The results of the native sample are considered to have a potentially high bias for these compounds.

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Case Narrative (continued)**

**Dissolved Metals**

The WG1270676-5 Laboratory Duplicate RPD for iron (48%), performed on L1934250-03, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

**Dissolved Organic Carbon**

L1934250-01 through -04: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.

The WG1270173-3 Laboratory Duplicate RPD (29%), performed on L1934250-03, is above the acceptance criteria; however, the sample and duplicate results are less than five times the reporting limit. Therefore, the RPD is valid.

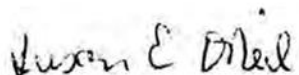
**Total Organic Carbon**

L1934250-03 and 04: The sample was received in an inappropriate container for the analysis.

The WG1270174-4 MS recovery, performed on L1934250-03, is outside the acceptance criteria (78%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:

 Susan O'Neil

Title: Technical Director/Representative

Date: 08/15/19



# ORGANICS

# VOLATILES



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Analytical Method: 1,8260C

Analytical Date: 08/10/19 12:57

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	0.36	J	ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	0.69	J	ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	3.8		ug/l	0.50	0.18	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-01**Date Collected:** 07/31/19 10:37**Client ID:** BHC1-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	4.9		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	3.6	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-01**Date Collected:** 07/31/19 10:37**Client ID:** BHC1-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	104		70-130
Dibromofluoromethane	96		70-130



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-02  
 Client ID: BHC2-073119  
 Sample Location: ALABAMA

Date Collected: 07/31/19 12:25  
 Date Received: 08/01/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Leachate  
 Analytical Method: 1,8260C  
 Analytical Date: 08/10/19 13:22  
 Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	2.1		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	0.78		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-02**Date Collected:** 07/31/19 12:25**Client ID:** BHC2-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	4.4	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-02**Date Collected:** 07/31/19 12:25**Client ID:** BHC2-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	96		70-130



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-03

Date Collected: 07/31/19 14:14

Client ID: BHC3-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Analytical Method: 1,8260C

Analytical Date: 08/10/19 13:48

Analyst: PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	2.2		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-03**Date Collected:** 07/31/19 14:14**Client ID:** BHC3-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	2.0	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	97		70-130



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8260C  
**Analytical Date:** 08/10/19 14:14  
**Analyst:** PD

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	0.23	J	ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	2.2		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	3.5	J	ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	102		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/10/19 07:51  
**Analyst:** NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271817-5					
Methylene chloride	ND		ug/l	3.0	0.68
1,1-Dichloroethane	ND		ug/l	0.75	0.21
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.8	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	0.50	0.18
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	0.75	0.20
Ethylbenzene	ND		ug/l	0.50	0.17
Chloromethane	ND		ug/l	2.5	0.20
Bromomethane	ND		ug/l	1.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	1.0	0.13
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/10/19 07:51  
**Analyst:** NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271817-5					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
Methyl tert butyl ether	ND		ug/l	1.0	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Dibromomethane	ND		ug/l	5.0	0.36
1,4-Dichlorobutane	ND		ug/l	5.0	0.46
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	0.31
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Ethyl methacrylate	ND		ug/l	5.0	0.61
Acrylonitrile	ND		ug/l	5.0	0.43
Bromochloromethane	ND		ug/l	2.5	0.15
Tetrahydrofuran	ND		ug/l	5.0	0.52
2,2-Dichloropropane	ND		ug/l	2.5	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.5	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16
Bromobenzene	ND		ug/l	2.5	0.15
n-Butylbenzene	ND		ug/l	0.50	0.19
sec-Butylbenzene	ND		ug/l	0.50	0.18
tert-Butylbenzene	ND		ug/l	2.5	0.20



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/10/19 07:51  
**Analyst:** NLK

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271817-5					
o-Chlorotoluene	ND		ug/l	2.5	0.22
p-Chlorotoluene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
Hexachlorobutadiene	ND		ug/l	0.50	0.22
Isopropylbenzene	ND		ug/l	0.50	0.19
p-Isopropyltoluene	ND		ug/l	0.50	0.19
Naphthalene	0.22	J	ug/l	2.5	0.22
n-Propylbenzene	ND		ug/l	0.50	0.17
1,2,3-Trichlorobenzene	0.26	J	ug/l	2.5	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21
Ethyl ether	ND		ug/l	2.5	0.16

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	104		70-130
Toluene-d8	103		70-130
4-Bromofluorobenzene	105		70-130
Dibromofluoromethane	98		70-130





## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271817-3 WG1271817-4								
Methylene chloride	93		92		70-130	1		20
1,1-Dichloroethane	89		94		70-130	5		20
Chloroform	88		95		70-130	8		20
Carbon tetrachloride	90		95		63-132	5		20
1,2-Dichloropropane	90		95		70-130	5		20
Dibromochloromethane	97		100		63-130	3		20
1,1,2-Trichloroethane	100		110		70-130	10		20
Tetrachloroethene	94		98		70-130	4		20
Chlorobenzene	92		99		75-130	7		25
Trichlorofluoromethane	92		96		62-150	4		20
1,2-Dichloroethane	96		97		70-130	1		20
1,1,1-Trichloroethane	88		92		67-130	4		20
Bromodichloromethane	90		95		67-130	5		20
trans-1,3-Dichloropropene	100		100		70-130	0		20
cis-1,3-Dichloropropene	91		92		70-130	1		20
1,1-Dichloropropene	88		94		70-130	7		20
Bromoform	100		100		54-136	0		20
1,1,2,2-Tetrachloroethane	100		110		67-130	10		20
Benzene	89		96		70-130	8		25
Toluene	93		99		70-130	6		25
Ethylbenzene	90		98		70-130	9		20
Chloromethane	100		100		64-130	0		20
Bromomethane	82		98		39-139	18		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271817-3 WG1271817-4								
Vinyl chloride	94		96		55-140	2		20
Chloroethane	88		91		55-138	3		20
1,1-Dichloroethene	87		92		61-145	6		25
trans-1,2-Dichloroethene	88		91		70-130	3		20
Trichloroethene	90		94		70-130	4		25
1,2-Dichlorobenzene	95		100		70-130	5		20
1,3-Dichlorobenzene	93		99		70-130	6		20
1,4-Dichlorobenzene	93		99		70-130	6		20
Methyl tert butyl ether	97		99		63-130	2		20
p/m-Xylene	90		95		70-130	5		20
o-Xylene	90		100		70-130	11		20
cis-1,2-Dichloroethene	90		92		70-130	2		20
Dibromomethane	97		96		70-130	1		20
1,4-Dichlorobutane	100		110		70-130	10		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Styrene	90		95		70-130	5		20
Dichlorodifluoromethane	95		97		36-147	2		20
Acetone	130		130		58-148	0		20
Carbon disulfide	88		90		51-130	2		20
2-Butanone	130		120		63-138	8		20
Vinyl acetate	100		100		70-130	0		20
4-Methyl-2-pentanone	110		110		59-130	0		20
2-Hexanone	110		120		57-130	9		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271817-3 WG1271817-4								
Ethyl methacrylate	94		98		70-130	4		20
Acrylonitrile	110		110		70-130	0		20
Bromochloromethane	97		99		70-130	2		20
Tetrahydrofuran	120		120		58-130	0		20
2,2-Dichloropropane	91		92		63-133	1		20
1,2-Dibromoethane	100		110		70-130	10		20
1,3-Dichloropropane	100		100		70-130	0		20
1,1,1,2-Tetrachloroethane	94		99		64-130	5		20
Bromobenzene	95		99		70-130	4		20
n-Butylbenzene	91		100		53-136	9		20
sec-Butylbenzene	91		100		70-130	9		20
tert-Butylbenzene	91		100		70-130	9		20
o-Chlorotoluene	89		100		70-130	12		20
p-Chlorotoluene	92		100		70-130	8		20
1,2-Dibromo-3-chloropropane	100		100		41-144	0		20
Hexachlorobutadiene	89		100		63-130	12		20
Isopropylbenzene	91		99		70-130	8		20
p-Isopropyltoluene	90		100		70-130	11		20
Naphthalene	100		110		70-130	10		20
n-Propylbenzene	91		100		69-130	9		20
1,2,3-Trichlorobenzene	100		110		70-130	10		20
1,2,4-Trichlorobenzene	100		110		70-130	10		20
1,3,5-Trimethylbenzene	90		100		64-130	11		20



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Lab Number:** L1934250

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271817-3 WG1271817-4								
1,2,4-Trimethylbenzene	94		100		70-130	6		20
trans-1,4-Dichloro-2-butene	99		110		70-130	11		20
Ethyl ether	97		100		59-134	3		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	108		104		70-130
Toluene-d8	104		104		70-130
4-Bromofluorobenzene	101		100		70-130
Dibromofluoromethane	98		96		70-130

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1271817-6 WG1271817-7 QC Sample: L1934250-03 Client ID: BHC3-073119												
Methylene chloride	ND	10	9.8	98		10	100		70-130	2		20
1,1-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
Chloroform	ND	10	10	100		11	110		70-130	10		20
Carbon tetrachloride	ND	10	11	110		11	110		63-132	0		20
1,2-Dichloropropane	ND	10	10	100		11	110		70-130	10		20
Dibromochloromethane	ND	10	10	100		10	100		63-130	0		20
1,1,2-Trichloroethane	ND	10	11	110		11	110		70-130	0		20
Tetrachloroethene	2.2	10	13	108		13	108		70-130	0		20
Chlorobenzene	ND	10	11	110		10	100		75-130	10		25
Trichlorofluoromethane	ND	10	12	120		12	120		62-150	0		20
1,2-Dichloroethane	ND	10	10	100		10	100		70-130	0		20
1,1,1-Trichloroethane	ND	10	11	110		11	110		67-130	0		20
Bromodichloromethane	ND	10	10	100		10	100		67-130	0		20
trans-1,3-Dichloropropene	ND	10	10	100		10	100		70-130	0		20
cis-1,3-Dichloropropene	ND	10	9.5	95		9.7	97		70-130	2		20
1,1-Dichloropropene	ND	10	11	110		11	110		70-130	0		20
Bromoform	ND	10	10	100		11	110		54-136	10		20
1,1,2,2-Tetrachloroethane	ND	10	11	110		11	110		67-130	0		20
Benzene	ND	10	10	100		11	110		70-130	10		25
Toluene	ND	10	11	110		11	110		70-130	0		25
Ethylbenzene	ND	10	11	110		11	110		70-130	0		20
Chloromethane	ND	10	11	110		11	110		64-130	0		20
Bromomethane	ND	10	8.6	86		10	100		39-139	15		20

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1271817-6 WG1271817-7 QC Sample: L1934250-03 Client ID: BHC3-073119												
Vinyl chloride	ND	10	11	110		11	110		55-140	0		20
Chloroethane	ND	10	10	100		10	100		55-138	0		20
1,1-Dichloroethene	ND	10	11	110		11	110		61-145	0		25
trans-1,2-Dichloroethene	ND	10	10	100		10	100		70-130	0		20
Trichloroethene	ND	10	10	100		11	110		70-130	10		25
1,2-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,3-Dichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,4-Dichlorobenzene	ND	10	10	100		10	100		70-130	0		20
Methyl tert butyl ether	ND	10	10	100		10	100		63-130	0		20
p/m-Xylene	ND	20	21	105		21	105		70-130	0		20
o-Xylene	ND	20	21	105		21	105		70-130	0		20
cis-1,2-Dichloroethene	ND	10	10	100		10	100		70-130	0		20
Dibromomethane	ND	10	10	100		10	100		70-130	0		20
1,4-Dichlorobutane	ND	10	11	110		11	110		70-130	0		20
1,2,3-Trichloropropane	ND	10	11	110		11	110		64-130	0		20
Styrene	ND	20	20	100		21	105		70-130	5		20
Dichlorodifluoromethane	ND	10	11	110		11	110		36-147	0		20
Acetone	2.0J	10	15	150	Q	15	150	Q	58-148	0		20
Carbon disulfide	ND	10	10	100		10	100		51-130	0		20
2-Butanone	ND	10	12	120		12	120		63-138	0		20
Vinyl acetate	ND	10	9.5	95		9.5	95		70-130	0		20
4-Methyl-2-pentanone	ND	10	12	120		12	120		59-130	0		20
2-Hexanone	ND	10	11	110		12	120		57-130	9		20



# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1271817-6 WG1271817-7 QC Sample: L1934250-03 Client ID: BHC3-073119												
Ethyl methacrylate	ND	10	9.8	98		9.8	98		70-130	0		20
Acrylonitrile	ND	10	11	110		11	110		70-130	0		20
Bromochloromethane	ND	10	11	110		11	110		70-130	0		20
Tetrahydrofuran	ND	10	11	110		12	120		58-130	9		20
2,2-Dichloropropane	ND	10	8.7	87		9.1	91		63-133	4		20
1,2-Dibromoethane	ND	10	11	110		11	110		70-130	0		20
1,3-Dichloropropane	ND	10	11	110		11	110		70-130	0		20
1,1,1,2-Tetrachloroethane	ND	10	10	100		10	100		64-130	0		20
Bromobenzene	ND	10	10	100		11	110		70-130	10		20
n-Butylbenzene	ND	10	11	110		11	110		53-136	0		20
sec-Butylbenzene	ND	10	11	110		12	120		70-130	9		20
tert-Butylbenzene	ND	10	11	110		11	110		70-130	0		20
o-Chlorotoluene	ND	10	11	110		11	110		70-130	0		20
p-Chlorotoluene	ND	10	10	100		11	110		70-130	10		20
1,2-Dibromo-3-chloropropane	ND	10	10	100		11	110		41-144	10		20
Hexachlorobutadiene	ND	10	10	100		11	110		63-130	10		20
Isopropylbenzene	ND	10	11	110		11	110		70-130	0		20
p-Isopropyltoluene	ND	10	11	110		11	110		70-130	0		20
Naphthalene	ND	10	11	110		12	120		70-130	9		20
n-Propylbenzene	ND	10	11	110		11	110		69-130	0		20
1,2,3-Trichlorobenzene	ND	10	11	110		12	120		70-130	9		20
1,2,4-Trichlorobenzene	ND	10	10	100		11	110		70-130	10		20
1,3,5-Trimethylbenzene	ND	10	11	110		11	110		64-130	0		20

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1271817-6 WG1271817-7 QC Sample: L1934250-03 Client ID: BHC3-073119												
1,2,4-Trimethylbenzene	ND	10	11	110		11	110		70-130	0		20
trans-1,4-Dichloro-2-butene	ND	10	10	100		10	100		70-130	0		20
Ethyl ether	ND	10	10	100		10	100		59-134	0		20

Surrogate	MS		MSD		Acceptance Criteria
	% Recovery	Qualifier	% Recovery	Qualifier	
1,2-Dichloroethane-d4	101		107		70-130
4-Bromofluorobenzene	101		101		70-130
Dibromofluoromethane	99		98		70-130
Toluene-d8	103		102		70-130

# SEMIVOLATILES



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Extraction Method: EPA 3510C

Analytical Method: 1,8270D

Extraction Date: 08/05/19 08:25

Analytical Date: 08/14/19 16:58

Analyst: SZ

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-01  
**Client ID:** BHC1-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 10:37  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	53		21-120
Phenol-d6	42		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	68		15-120
2,4,6-Tribromophenol	53		10-120
4-Terphenyl-d14	76		41-149



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-02  
 Client ID: BHC2-073119  
 Sample Location: ALABAMA

Date Collected: 07/31/19 12:25  
 Date Received: 08/01/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Leachate  
 Analytical Method: 1,8270D  
 Analytical Date: 08/07/19 14:09  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 08/05/19 08:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-02**Date Collected:** 07/31/19 12:25**Client ID:** BHC2-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-02  
**Client ID:** BHC2-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 12:25  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	83		21-120
Phenol-d6	72		10-120
Nitrobenzene-d5	118		23-120
2-Fluorobiphenyl	93		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	95		41-149



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate  
**Analytical Method:** 1,8270D  
**Analytical Date:** 08/07/19 19:40  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/05/19 08:25

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	0.44	J	ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-03**Date Collected:** 07/31/19 14:14**Client ID:** BHC3-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	0.38	J	ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		21-120
Phenol-d6	51		10-120
Nitrobenzene-d5	82		23-120
2-Fluorobiphenyl	82		15-120
2,4,6-Tribromophenol	57		10-120
4-Terphenyl-d14	92		41-149



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-04  
 Client ID: BHC3-073119FD  
 Sample Location: ALABAMA

Date Collected: 07/31/19 14:35  
 Date Received: 08/01/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Leachate  
 Analytical Method: 1,8270D  
 Analytical Date: 08/07/19 14:37  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 08/05/19 15:40

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	87		21-120
Phenol-d6	76		10-120
Nitrobenzene-d5	114		23-120
2-Fluorobiphenyl	92		15-120
2,4,6-Tribromophenol	70		10-120
4-Terphenyl-d14	90		41-149



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/07/19 11:20  
**Analyst:** JG

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/05/19 08:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1268587-1					
Acenaphthene	ND		ug/l	2.0	0.44
Benzidine	ND		ug/l	20	1.8
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	2.8	J	ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/07/19 11:20  
**Analyst:** JG

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/05/19 08:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1268587-1					
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.1
1-Methylnaphthalene	ND		ug/l	2.0	0.45
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/07/19 11:20  
**Analyst:** JG

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/05/19 08:25

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1268587-1					
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49
Pyridine	ND		ug/l	3.5	1.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	56		21-120
Phenol-d6	50		10-120
Nitrobenzene-d5	75		23-120
2-Fluorobiphenyl	70		15-120
2,4,6-Tribromophenol	46		10-120
4-Terphenyl-d14	80		41-149





## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1268587-2 WG1268587-3								
Acenaphthene	94		89		37-111	5		30
Benzidine	2	Q	11		10-75	144	Q	30
1,2,4-Trichlorobenzene	85		79		39-98	7		30
Hexachlorobenzene	83		80		40-140	4		30
Bis(2-chloroethyl)ether	93		84		40-140	10		30
2-Chloronaphthalene	94		90		40-140	4		30
1,2-Dichlorobenzene	80		73		40-140	9		30
1,3-Dichlorobenzene	77		68		40-140	12		30
1,4-Dichlorobenzene	79		69		36-97	14		30
3,3'-Dichlorobenzidine	79		91		40-140	14		30
2,4-Dinitrotoluene	119		116		48-143	3		30
2,6-Dinitrotoluene	112		110		40-140	2		30
Azobenzene	120		113		40-140	6		30
Fluoranthene	102		109		40-140	7		30
4-Chlorophenyl phenyl ether	100		95		40-140	5		30
4-Bromophenyl phenyl ether	90		87		40-140	3		30
Bis(2-chloroisopropyl)ether	79		74		40-140	7		30
Bis(2-chloroethoxy)methane	108		100		40-140	8		30
Hexachlorobutadiene	78		72		40-140	8		30
Hexachlorocyclopentadiene	84		76		40-140	10		30
Hexachloroethane	89		78		40-140	13		30
Isophorone	112		106		40-140	6		30
Naphthalene	93		87		40-140	7		30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1268587-2 WG1268587-3								
Nitrobenzene	104		97		40-140	7		30
NDPA/DPA	105		104		40-140	1		30
n-Nitrosodi-n-propylamine	116		109		29-132	6		30
Bis(2-ethylhexyl)phthalate	112		132		40-140	16		30
Butyl benzyl phthalate	121		138		40-140	13		30
Di-n-butylphthalate	110		117		40-140	6		30
Di-n-octylphthalate	130		142	Q	40-140	9		30
Diethyl phthalate	123		120		40-140	2		30
Dimethyl phthalate	118		117		40-140	1		30
Benzo(a)anthracene	112		112		40-140	0		30
Benzo(a)pyrene	99		94		40-140	5		30
Benzo(b)fluoranthene	112		110		40-140	2		30
Benzo(k)fluoranthene	105		104		40-140	1		30
Chrysene	96		96		40-140	0		30
Acenaphthylene	105		102		45-123	3		30
Anthracene	108		111		40-140	3		30
Benzo(ghi)perylene	112		110		40-140	2		30
Fluorene	105		98		40-140	7		30
Phenanthrene	98		100		40-140	2		30
Dibenzo(a,h)anthracene	106		104		40-140	2		30
Indeno(1,2,3-cd)pyrene	95		100		40-140	5		30
Pyrene	102		104		26-127	2		30
Biphenyl	94		89		40-140	5		30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1268587-2 WG1268587-3								
Aniline	62		60		40-140	3		30
4-Chloroaniline	76		75		40-140	1		30
1-Methylnaphthalene	102		93		41-103	9		30
2-Nitroaniline	111		110		52-143	1		30
3-Nitroaniline	98		100		25-145	2		30
4-Nitroaniline	109		109		51-143	0		30
Dibenzofuran	98		90		40-140	9		30
2-Methylnaphthalene	91		86		40-140	6		30
n-Nitrosodimethylamine	66		59		22-74	11		30
2,4,6-Trichlorophenol	102		100		30-130	2		30
p-Chloro-m-cresol	119	Q	115	Q	23-97	3		30
2-Chlorophenol	97		92		27-123	5		30
2,4-Dichlorophenol	106		104		30-130	2		30
2,4-Dimethylphenol	51		69		30-130	30		30
2-Nitrophenol	111		101		30-130	9		30
4-Nitrophenol	120	Q	120	Q	10-80	0		30
2,4-Dinitrophenol	107		93		20-130	14		30
4,6-Dinitro-o-cresol	128		122		20-164	5		30
Pentachlorophenol	95		93		9-103	2		30
Phenol	70		67		12-110	4		30
2-Methylphenol	90		93		30-130	3		30
3-Methylphenol/4-Methylphenol	102		104		30-130	2		30
2,4,5-Trichlorophenol	106		104		30-130	2		30



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1268587-2 WG1268587-3								
Benzoic Acid	77		71		10-164	8		30
Benzyl Alcohol	101		94		26-116	7		30
Carbazole	110		114		55-144	4		30
Pyridine	24		26		10-66	8		30

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
2-Fluorophenol	74		69		21-120
Phenol-d6	65		62		10-120
Nitrobenzene-d5	108		101		23-120
2-Fluorobiphenyl	91		86		15-120
2,4,6-Tribromophenol	76		79		10-120
4-Terphenyl-d14	89		97		41-149

**Matrix Spike Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-4 WG1268587-5 QC Sample: L1934250-03 Client ID: BHC3-073119												
Acenaphthene	ND	18.2	14	77		11	61		37-111	24		30
Benzidine	ND	18.2	4.6J	25		3.8J	21		10-75	19		30
1,2,4-Trichlorobenzene	ND	18.2	14	77		12	66		39-98	15		30
Hexachlorobenzene	ND	18.2	15	83		11	61		40-140	31	Q	30
Bis(2-chloroethyl)ether	ND	18.2	13	72		12	66		40-140	8		30
2-Chloronaphthalene	ND	18.2	15	83		12	66		40-140	22		30
1,2-Dichlorobenzene	ND	18.2	12	66		11	61		40-140	9		30
1,3-Dichlorobenzene	ND	18.2	12	66		11	61		40-140	9		30
1,4-Dichlorobenzene	ND	18.2	12	66		11	61		36-97	9		30
3,3'-Dichlorobenzidine	ND	18.2	12	66		9.6	53		40-140	22		30
2,4-Dinitrotoluene	ND	18.2	15	83		11	61		48-143	31	Q	30
2,6-Dinitrotoluene	ND	18.2	17	94		13	72		40-140	27		30
Azobenzene	ND	18.2	16	88		12	66		40-140	29		30
Fluoranthene	0.44J	18.2	18	99		13	72		40-140	32	Q	30
4-Chlorophenyl phenyl ether	ND	18.2	15	83		12	66		40-140	22		30
4-Bromophenyl phenyl ether	ND	18.2	16	88		12	66		40-140	29		30
Bis(2-chloroisopropyl)ether	ND	18.2	16	88		13	72		40-140	21		30
Bis(2-chloroethoxy)methane	ND	18.2	15	83		12	66		40-140	22		30
Hexachlorobutadiene	ND	18.2	14	77		12	66		40-140	15		30
Hexachlorocyclopentadiene	ND	18.2	14.J	77		12.J	66		40-140	15		30
Hexachloroethane	ND	18.2	13	72		11	61		40-140	17		30
Isophorone	ND	18.2	16	88		13	72		40-140	21		30
Naphthalene	ND	18.2	14	77		12	66		40-140	15		30

**Matrix Spike Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-4 WG1268587-5 QC Sample: L1934250-03 Client ID: BHC3-073119												
Nitrobenzene	ND	18.2	15	83		12	66		40-140	22		30
NDPA/DPA	ND	18.2	15	83		11	61		40-140	31	Q	30
n-Nitrosodi-n-propylamine	ND	18.2	16	88		13	72		29-132	21		30
Bis(2-ethylhexyl)phthalate	ND	18.2	18	99		13	72		40-140	32	Q	30
Butyl benzyl phthalate	ND	18.2	19	100		14	77		40-140	30		30
Di-n-butylphthalate	ND	18.2	18	99		13	72		40-140	32	Q	30
Di-n-octylphthalate	ND	18.2	21	120		15	83		40-140	33	Q	30
Diethyl phthalate	ND	18.2	16	88		12	66		40-140	29		30
Dimethyl phthalate	ND	18.2	18	99		13	72		40-140	32	Q	30
Benzo(a)anthracene	ND	18.2	18	99		14	77		40-140	25		30
Benzo(a)pyrene	ND	18.2	16	88		13	72		40-140	21		30
Benzo(b)fluoranthene	ND	18.2	17	94		14	77		40-140	19		30
Benzo(k)fluoranthene	ND	18.2	18	99		13	72		40-140	32	Q	30
Chrysene	ND	18.2	16	88		13	72		40-140	21		30
Acenaphthylene	ND	18.2	16	88		12	66		45-123	29		30
Anthracene	ND	18.2	17	94		13	72		40-140	27		30
Benzo(ghi)perylene	ND	18.2	16	88		14	77		40-140	13		30
Fluorene	ND	18.2	15	83		12	66		40-140	22		30
Phenanthrene	ND	18.2	16	88		13	72		40-140	21		30
Dibenzo(a,h)anthracene	ND	18.2	17	94		14	77		40-140	19		30
Indeno(1,2,3-cd)pyrene	ND	18.2	17	94		14	77		40-140	19		30
Pyrene	0.38J	18.2	18	99		13	72		26-127	32	Q	30
Biphenyl	ND	18.2	15	83		12	66		40-140	22		30



# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-4 WG1268587-5 QC Sample: L1934250-03 Client ID: BHC3-073119												
Aniline	ND	18.2	9.6	53		6.8	37	Q	40-140	34	Q	30
4-Chloroaniline	ND	18.2	17	94		13	72		40-140	27		30
1-Methylnaphthalene	ND	18.2	15	83		12	66		41-103	22		30
2-Nitroaniline	ND	18.2	18	99		13	72		52-143	32	Q	30
3-Nitroaniline	ND	18.2	13	72		10	55		25-145	26		30
4-Nitroaniline	ND	18.2	15	83		10	55		51-143	40	Q	30
Dibenzofuran	ND	18.2	14	77		11	61		40-140	24		30
2-Methylnaphthalene	ND	18.2	14	77		12	66		40-140	15		30
n-Nitrosodimethylamine	ND	18.2	11	61		10	55		22-74	10		30
2,4,6-Trichlorophenol	ND	18.2	17	94		13	72		30-130	27		30
p-Chloro-m-cresol	ND	18.2	18	99	Q	13	72		23-97	32	Q	30
2-Chlorophenol	ND	18.2	14	77		11	61		27-123	24		30
2,4-Dichlorophenol	ND	18.2	15	83		12	66		30-130	22		30
2,4-Dimethylphenol	ND	18.2	9.2	51		6.4	35		30-130	36	Q	30
2-Nitrophenol	ND	18.2	16	88		13	72		30-130	21		30
4-Nitrophenol	ND	18.2	16	88	Q	11	61		10-80	37	Q	30
2,4-Dinitrophenol	ND	18.2	16.J	88		13.J	72		20-130	21		30
4,6-Dinitro-o-cresol	ND	18.2	18	99		13	72		20-164	32	Q	30
Pentachlorophenol	ND	18.2	16	88		12	66		9-103	29		30
Phenol	ND	18.2	11	61		8.6	47		12-110	24		30
2-Methylphenol	ND	18.2	13	72		10	55		30-130	26		30
3-Methylphenol/4-Methylphenol	ND	18.2	15	83		11	61		30-130	31	Q	30
2,4,5-Trichlorophenol	ND	18.2	18	99		13	72		30-130	32	Q	30

**Matrix Spike Analysis***Batch Quality Control***Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-4 WG1268587-5 QC Sample: L1934250-03 Client ID: BHC3-073119												
Benzoic Acid	ND	18.2	13.J	72		10.J	55		10-164	26		30
Benzyl Alcohol	ND	18.2	14	77		12	66		26-116	15		30
Carbazole	ND	18.2	18	99		13	72		55-144	32	Q	30
Pyridine	ND	18.2	5.8	32		4.4	24		10-66	27		30

<b>Surrogate</b>	<b>MS</b>		<b>MSD</b>		<b>Acceptance Criteria</b>
	<b>% Recovery</b>	<b>Qualifier</b>	<b>% Recovery</b>	<b>Qualifier</b>	
2,4,6-Tribromophenol	73		55		10-120
2-Fluorobiphenyl	83		69		15-120
2-Fluorophenol	60		50		21-120
4-Terphenyl-d14	96		70		41-149
Nitrobenzene-d5	82		68		23-120
Phenol-d6	54		42		10-120

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatle Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Acenaphthene	ND	ND	ug/l	NC		30
Benzidine	ND	ND	ug/l	NC		30
1,2,4-Trichlorobenzene	ND	ND	ug/l	NC		30
Hexachlorobenzene	ND	ND	ug/l	NC		30
Bis(2-chloroethyl)ether	ND	ND	ug/l	NC		30
2-Chloronaphthalene	ND	ND	ug/l	NC		30
1,2-Dichlorobenzene	ND	ND	ug/l	NC		30
1,3-Dichlorobenzene	ND	ND	ug/l	NC		30
1,4-Dichlorobenzene	ND	ND	ug/l	NC		30
3,3'-Dichlorobenzidine	ND	ND	ug/l	NC		30
2,4-Dinitrotoluene	ND	ND	ug/l	NC		30
2,6-Dinitrotoluene	ND	ND	ug/l	NC		30
Azobenzene	ND	ND	ug/l	NC		30
Fluoranthene	0.44J	ND	ug/l	NC		30
4-Chlorophenyl phenyl ether	ND	ND	ug/l	NC		30
4-Bromophenyl phenyl ether	ND	ND	ug/l	NC		30
Bis(2-chloroisopropyl)ether	ND	ND	ug/l	NC		30
Bis(2-chloroethoxy)methane	ND	ND	ug/l	NC		30
Hexachlorobutadiene	ND	ND	ug/l	NC		30
Hexachlorocyclopentadiene	ND	ND	ug/l	NC		30
Hexachloroethane	ND	ND	ug/l	NC		30



# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Isophorone	ND	ND	ug/l	NC		30
Naphthalene	ND	ND	ug/l	NC		30
Nitrobenzene	ND	ND	ug/l	NC		30
NDPA/DPA	ND	ND	ug/l	NC		30
n-Nitrosodi-n-propylamine	ND	ND	ug/l	NC		30
Bis(2-ethylhexyl)phthalate	ND	ND	ug/l	NC		30
Butyl benzyl phthalate	ND	ND	ug/l	NC		30
Di-n-butylphthalate	ND	ND	ug/l	NC		30
Di-n-octylphthalate	ND	ND	ug/l	NC		30
Diethyl phthalate	ND	ND	ug/l	NC		30
Dimethyl phthalate	ND	ND	ug/l	NC		30
Benzo(a)anthracene	ND	ND	ug/l	NC		30
Benzo(a)pyrene	ND	ND	ug/l	NC		30
Benzo(b)fluoranthene	ND	ND	ug/l	NC		30
Benzo(k)fluoranthene	ND	ND	ug/l	NC		30
Chrysene	ND	ND	ug/l	NC		30
Acenaphthylene	ND	ND	ug/l	NC		30
Anthracene	ND	ND	ug/l	NC		30
Benzo(ghi)perylene	ND	ND	ug/l	NC		30
Fluorene	ND	ND	ug/l	NC		30
Phenanthrene	ND	ND	ug/l	NC		30

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Dibenzo(a,h)anthracene	ND	ND	ug/l	NC		30
Indeno(1,2,3-cd)pyrene	ND	ND	ug/l	NC		30
Pyrene	0.38J	ND	ug/l	NC		30
Biphenyl	ND	ND	ug/l	NC		30
Aniline	ND	ND	ug/l	NC		30
4-Chloroaniline	ND	ND	ug/l	NC		30
1-Methylnaphthalene	ND	ND	ug/l	NC		30
2-Nitroaniline	ND	ND	ug/l	NC		30
3-Nitroaniline	ND	ND	ug/l	NC		30
4-Nitroaniline	ND	ND	ug/l	NC		30
Dibenzofuran	ND	ND	ug/l	NC		30
2-Methylnaphthalene	ND	ND	ug/l	NC		30
n-Nitrosodimethylamine	ND	ND	ug/l	NC		30
2,4,6-Trichlorophenol	ND	ND	ug/l	NC		30
p-Chloro-m-cresol	ND	ND	ug/l	NC		30
2-Chlorophenol	ND	ND	ug/l	NC		30
2,4-Dichlorophenol	ND	ND	ug/l	NC		30
2,4-Dimethylphenol	ND	ND	ug/l	NC		30
2-Nitrophenol	ND	ND	ug/l	NC		30
4-Nitrophenol	ND	ND	ug/l	NC		30
2,4-Dinitrophenol	ND	ND	ug/l	NC		30

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Semivolatiles by GC/MS - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268587-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
4,6-Dinitro-o-cresol	ND	ND	ug/l	NC		30
Pentachlorophenol	ND	ND	ug/l	NC		30
Phenol	ND	ND	ug/l	NC		30
2-Methylphenol	ND	ND	ug/l	NC		30
3-Methylphenol/4-Methylphenol	ND	ND	ug/l	NC		30
2,4,5-Trichlorophenol	ND	ND	ug/l	NC		30
Benzoic Acid	ND	ND	ug/l	NC		30
Benzyl Alcohol	ND	ND	ug/l	NC		30
Carbazole	ND	ND	ug/l	NC		30
Pyridine	ND	ND	ug/l	NC		30

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	60		62		21-120
Phenol-d6	51		48		10-120
Nitrobenzene-d5	82		85		23-120
2-Fluorobiphenyl	82		88		15-120
2,4,6-Tribromophenol	57		61		10-120
4-Terphenyl-d14	92		97		41-149



# PCBS

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-01  
**Client ID:** BHC1-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 10:37  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 02:44  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	41		30-150	A
Decachlorobiphenyl	50		30-150	A
2,4,5,6-Tetrachloro-m-xylene	41		30-150	B
Decachlorobiphenyl	48		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-02  
**Client ID:** BHC2-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 12:25  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 02:57  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	66		30-150	B



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 04:32  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	93		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 03:11  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	67		30-150	A
Decachlorobiphenyl	76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	62		30-150	B
Decachlorobiphenyl	72		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

### Method Blank Analysis Batch Quality Control

**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 06:21  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269317-1						
Aroclor 1016	ND		ug/l	0.250	0.034	A
Aroclor 1221	ND		ug/l	0.250	0.067	A
Aroclor 1232	ND		ug/l	0.250	0.046	A
Aroclor 1242	ND		ug/l	0.250	0.039	A
Aroclor 1248	ND		ug/l	0.250	0.049	A
Aroclor 1254	ND		ug/l	0.250	0.039	A
Aroclor 1260	ND		ug/l	0.250	0.032	A
Aroclor 1262	ND		ug/l	0.250	0.035	A
Aroclor 1268	ND		ug/l	0.250	0.034	A
PCBs, Total	ND		ug/l	0.250	0.032	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	64		30-150	B



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269317-2 WG1269317-3									
Aroclor 1016	66		69		40-140	5		50	A
Aroclor 1260	62		65		40-140	4		50	A

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	63		69		30-150	A
Decachlorobiphenyl	68		76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		67		30-150	B
Decachlorobiphenyl	69		77		30-150	B

**Matrix Spike Analysis***Batch Quality Control***Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

<b>Parameter</b>	<b>Native Sample</b>	<b>MS Added</b>	<b>MS Found</b>	<b>MS %Recovery</b>	<b>Qual</b>	<b>MSD Found</b>	<b>MSD %Recovery</b>	<b>Qual</b>	<b>Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269317-4 WG1269317-5 QC Sample: L1934250-03 Client ID: BHC3-073119													
Aroclor 1016	ND	1.78	1.12	63		1.21	68		40-140	8		50	A
Aroclor 1260	ND	1.78	1.06	59		1.14	64		40-140	7		50	A

<b>Surrogate</b>	<b>MS % Recovery</b>	<b>Qualifier</b>	<b>MSD % Recovery</b>	<b>Qualifier</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	82		67		30-150	A
Decachlorobiphenyl	89		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	75		64		30-150	B
Decachlorobiphenyl	85		71		30-150	B

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269317-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Aroclor 1016	ND	ND	ug/l	NC		50 A
Aroclor 1221	ND	ND	ug/l	NC		50 A
Aroclor 1232	ND	ND	ug/l	NC		50 A
Aroclor 1242	ND	ND	ug/l	NC		50 A
Aroclor 1248	ND	ND	ug/l	NC		50 A
Aroclor 1254	ND	ND	ug/l	NC		50 A
Aroclor 1260	ND	ND	ug/l	NC		50 A
Aroclor 1262	ND	ND	ug/l	NC		50 A
Aroclor 1268	ND	ND	ug/l	NC		50 A
PCBs, Total	ND	ND	ug/l	NC		50 A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		44		30-150	A
Decachlorobiphenyl	93		49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		44		30-150	B
Decachlorobiphenyl	93		50		30-150	B

# PESTICIDES



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-01  
**Client ID:** BHC1-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 10:37  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/12/19 17:18  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.012	JP	ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.009	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-01**Date Collected:** 07/31/19 10:37**Client ID:** BHC1-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	31		30-150	A
Decachlorobiphenyl	23	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	29	Q	30-150	B
Decachlorobiphenyl	19	Q	30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-01  
**Client ID:** BHC1-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 10:37  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/09/19 19:26  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/07/19 13:37

**Methylation Date:** 08/08/19 11:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	67		30-150	A
DCAA	68		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01 RE

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Extraction Method: EPA 3510C

Analytical Method: 1,8081B

Extraction Date: 08/14/19 00:43

Analytical Date: 08/14/19 15:43

Cleanup Method: EPA 3620B

Analyst: SL

Cleanup Date: 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.022		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.025	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01 RE

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	69		30-150	B
Decachlorobiphenyl	70		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-02  
**Client ID:** BHC2-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 12:25  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/12/19 17:29  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.034		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.033		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	B
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-02**Date Collected:** 07/31/19 12:25**Client ID:** BHC2-073119**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	94		30-150	A
Decachlorobiphenyl	68		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		30-150	B
Decachlorobiphenyl	57		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-02  
**Client ID:** BHC2-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 12:25  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/09/19 19:44  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/07/19 13:37

**Methylation Date:** 08/08/19 11:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	49		30-150	A
DCAA	51		30-150	B



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-02 RE

Date Collected: 07/31/19 12:25

Client ID: BHC2-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Extraction Method: EPA 3510C

Analytical Method: 1,8081B

Extraction Date: 08/14/19 00:43

Analytical Date: 08/14/19 15:54

Cleanup Method: EPA 3620B

Analyst: SL

Cleanup Date: 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.031		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.033		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	B
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-02 RE

Date Collected: 07/31/19 12:25

Client ID: BHC2-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	82		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		30-150	B
Decachlorobiphenyl	73		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/12/19 17:41  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.020		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.021	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	34		30-150	A
Decachlorobiphenyl	27	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	32		30-150	B
Decachlorobiphenyl	23	Q	30-150	B



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/09/19 18:13  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/07/19 13:37

**Methylation Date:** 08/08/19 11:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	61		30-150	A
DCAA	66		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-03 RE

Date Collected: 07/31/19 14:14

Client ID: BHC3-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Extraction Method: EPA 3510C

Analytical Method: 1,8081B

Extraction Date: 08/14/19 00:43

Analytical Date: 08/14/19 16:06

Cleanup Method: EPA 3620B

Analyst: SL

Cleanup Date: 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.033		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.040		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	0.005	J	ug/l	0.014	0.005	1	A
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-03 RE

Date Collected: 07/31/19 14:14

Client ID: BHC3-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	67		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/13/19 01:33  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.041		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.048		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	B
trans-Chlordane	0.0090	JP	ug/l	0.014	0.004	1	A



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934250-04**Date Collected:** 07/31/19 14:35**Client ID:** BHC3-073119FD**Date Received:** 08/01/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	64		30-150	B
Decachlorobiphenyl	78		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/09/19 20:02  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/07/19 13:37

**Methylation Date:** 08/08/19 11:36

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	90		30-150	A
DCAA	87		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04      **RE**  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 17:05  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.032		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.040		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-04 RE

Date Collected: 07/31/19 14:35

Client ID: BHC3-073119FD

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	49		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	46		30-150	B



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8081B  
**Analytical Date:** 08/12/19 16:42  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269345-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
Chlordane	ND		ug/l	0.143	0.033	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8081B  
 Analytical Date: 08/12/19 16:42  
 Analyst: SL

Extraction Method: EPA 3510C  
 Extraction Date: 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269345-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	30		30-150	A
Decachlorobiphenyl	20	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	28	Q	30-150	B
Decachlorobiphenyl	20	Q	30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8151A  
**Analytical Date:** 08/09/19 17:19  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/07/19 13:37

**Methylation Date:** 08/08/19 11:36

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269658-1						
MCPPP	ND		ug/l	500	58.5	A
MCPA	ND		ug/l	500	63.2	A
Dalapon	ND		ug/l	20.0	0.810	A
Dicamba	ND		ug/l	1.00	0.243	A
Dichloroprop	ND		ug/l	10.0	0.564	A
2,4-D	ND		ug/l	10.0	0.498	A
2,4-DB	ND		ug/l	10.0	0.729	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A
Dinoseb	ND		ug/l	5.00	0.573	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	90		30-150	A
DCAA	81		30-150	B

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 15:07  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1272024-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
Chlordane	ND		ug/l	0.143	0.033	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8081B  
 Analytical Date: 08/14/19 15:07  
 Analyst: SL

Extraction Method: EPA 3510C  
 Extraction Date: 08/14/19 00:43  
 Cleanup Method: EPA 3620B  
 Cleanup Date: 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1272024-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	75		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

Project Name: DECATUR AL-MEYERS BROWN

Project Number: 190780-01.01

Lab Number: L1934250

Report Date: 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269345-2 WG1269345-3									
Delta-BHC	31		78		30-150	87	Q	20	A
Lindane	32		79		30-150	85	Q	20	A
Alpha-BHC	32		80		30-150	86	Q	20	A
Beta-BHC	33		78		30-150	80	Q	20	A
Heptachlor	32		77		30-150	83	Q	20	A
Aldrin	31		75		30-150	82	Q	20	A
Heptachlor epoxide	36		86		30-150	83	Q	20	A
Endrin	32		81		30-150	87	Q	20	A
Endrin aldehyde	22	Q	58		30-150	89	Q	20	A
Endrin ketone	28	Q	71		30-150	86	Q	20	A
Dieldrin	33		84		30-150	87	Q	20	A
4,4'-DDE	32		81		30-150	88	Q	20	A
4,4'-DDD	32		82		30-150	88	Q	20	A
4,4'-DDT	28	Q	77		30-150	92	Q	20	A
Endosulfan I	30		75		30-150	85	Q	20	A
Endosulfan II	30	Q	76		30-150	87	Q	20	A
Endosulfan sulfate	29	Q	76		30-150	91	Q	20	A
Methoxychlor	25	Q	69		30-150	93	Q	20	A
cis-Chlordane	30		71		30-150	81	Q	20	A
trans-Chlordane	31		78		30-150	85	Q	20	A

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269345-2 WG1269345-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	32		75		30-150	A
Decachlorobiphenyl	<b>24</b>	Q	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	30		74		30-150	B
Decachlorobiphenyl	35		50		30-150	B

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269658-2 WG1269658-3									
MCPP	88		77		30-150	13		25	A
MCPA	90		114		30-150	24		25	A
Dalapon	59		67		30-150	13		25	A
Dicamba	79		77		30-150	3		25	A
Dichloroprop	76		73		30-150	4		25	A
2,4-D	75		72		30-150	4		25	A
2,4-DB	49		44		30-150	11		25	A
2,4,5-T	80		75		30-150	6		25	A
2,4,5-TP (Silvex)	83		80		30-150	4		25	A
Dinoseb	65		53		30-150	20		25	A

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
DCAA	67		59		30-150	A
DCAA	70		55		30-150	B



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1272024-2 WG1272024-3									
Delta-BHC	86		101		30-150	16		20	A
Lindane	85		98		30-150	15		20	A
Alpha-BHC	88		102		30-150	15		20	A
Beta-BHC	84		105		30-150	23	Q	20	A
Heptachlor	88		95		30-150	8		20	A
Aldrin	80		86		30-150	6		20	A
Heptachlor epoxide	96		114		30-150	17		20	A
Endrin	97		114		30-150	16		20	A
Endrin aldehyde	79		89		30-150	12		20	A
Endrin ketone	99		115		30-150	15		20	A
Dieldrin	97		113		30-150	16		20	A
4,4'-DDE	95		110		30-150	15		20	A
4,4'-DDD	100		117		30-150	16		20	A
4,4'-DDT	99		116		30-150	15		20	A
Endosulfan I	86		101		30-150	16		20	A
Endosulfan II	91		106		30-150	15		20	A
Endosulfan sulfate	105		121		30-150	14		20	A
Methoxychlor	92		108		30-150	16		20	A
cis-Chlordane	83		96		30-150	14		20	A
trans-Chlordane	88		101		30-150	14		20	A

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1272024-2 WG1272024-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	74		74		30-150	A
Decachlorobiphenyl	85		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		69		30-150	B
Decachlorobiphenyl	71		76		30-150	B

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269345-4 WG1269345-5 QC Sample: L1934250-03 Client ID: BHC3-073119													
Delta-BHC	ND	0.357	0.330	92		0.331	93		30-150	0		30	A
Lindane	ND	0.357	0.343	96		0.333	93		30-150	3		30	A
Alpha-BHC	ND	0.357	0.340	95		0.334	94		30-150	2		30	A
Beta-BHC	ND	0.357	0.348	97		0.336	94		30-150	4		30	A
Heptachlor	ND	0.357	0.335	94		0.324	91		30-150	3		30	A
Aldrin	ND	0.357	0.332	93		0.318	89		30-150	4		30	A
Heptachlor epoxide	0.020	0.357	0.415	111		0.408	109		30-150	2		30	A
Endrin	ND	0.357	0.368	103		0.358	100		30-150	3		30	A
Endrin aldehyde	ND	0.357	0.279	78		0.285	80		30-150	2		30	A
Endrin ketone	ND	0.357	0.330	92		0.335	94		30-150	2		30	A
Dieldrin	0.021J	0.357	0.435	122		0.422	118		30-150	3		30	A
4,4'-DDE	ND	0.357	0.360	101		0.346	97		30-150	4		30	A
4,4'-DDD	ND	0.357	0.372	104		0.363	102		30-150	2		30	A
4,4'-DDT	ND	0.357	0.345	97		0.338	95		30-150	2		30	A
Endosulfan I	ND	0.357	0.337	94		0.324	91		30-150	4		30	A
Endosulfan II	ND	0.357	0.340	95		0.338	95		30-150	1		30	A
Endosulfan sulfate	ND	0.357	0.352	99		0.366	102		30-150	4		30	A
Methoxychlor	ND	0.357	0.307	86		0.303	85		30-150	1		30	A
cis-Chlordane	ND	0.357	0.334	94		0.320	90		30-150	4		30	A
trans-Chlordane	NDIP	0.357	0.349	98		0.336	94		30-150	4		30	A

**Matrix Spike Analysis***Batch Quality Control***Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269345-4 WG1269345-5 QC Sample: L1934250-03 Client ID: BHC3-073119												

<i>Surrogate</i>	<i>MS</i>		<i>MSD</i>		<i>Acceptance Criteria</i>	<i>Column</i>
	<i>% Recovery</i>	<i>Qualifier</i>	<i>% Recovery</i>	<i>Qualifier</i>		
2,4,5,6-Tetrachloro-m-xylene	92		91		30-150	A
Decachlorobiphenyl	73		73		30-150	A
2,4,5,6-Tetrachloro-m-xylene	88		84		30-150	B
Decachlorobiphenyl	64		62		30-150	B



# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269658-4 WG1269658-5 QC Sample: L1934250-03 Client ID: BHC3-073119													
MCPP	ND	500	742	148		771	154	Q	30-150	4		25	A
MCPA	ND	500	468J	94		468J	94		30-150	0		25	A
Dalapon	ND	5	4.43J	89		4.13J	83		30-150	7		25	A
Dicamba	ND	5	5.26	105		5.47	109		30-150	4		25	A
Dichloroprop	ND	5	5.00J	100		5.30J	106		30-150	6		25	A
2,4-D	ND	5	5.31J	106		5.60J	112		30-150	5		25	A
2,4-DB	ND	5	4.30J	86		4.48J	90		30-150	4		25	A
2,4,5-T	ND	5	5.12	102		5.35	107		30-150	4		25	A
2,4,5-TP (Silvex)	ND	5	5.53	111		5.71	114		30-150	3		25	A
Dinoseb	ND	5	4.89J	98		4.81J	96		30-150	2		25	A

Surrogate	MS % Recovery	Qualifier	MSD % Recovery	Qualifier	Acceptance Criteria	Column
DCAA	100		103		30-150	A
DCAA	373	Q	224	Q	30-150	B

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1272024-4 WG1272024-5 QC Sample: L1934250-03 Client ID: BHC3-073119													
Delta-BHC	ND	0.357	0.284	80		0.262	73		30-150	8		30	A
Lindane	ND	0.357	0.294	82		0.270	76		30-150	9		30	A
Alpha-BHC	ND	0.357	0.304	85		0.278	78		30-150	9		30	A
Beta-BHC	ND	0.357	0.298	83		0.259	72		30-150	14		30	A
Heptachlor	ND	0.357	0.278	78		0.266	74		30-150	4		30	A
Aldrin	ND	0.357	0.255	71		0.252	71		30-150	1		30	A
Heptachlor epoxide	0.033	0.357	0.345	87		0.324	82		30-150	6		30	A
Endrin	ND	0.357	0.310	87		0.279	78		30-150	11		30	A
Endrin aldehyde	ND	0.357	0.264	74		0.240	67		30-150	10		30	A
Endrin ketone	ND	0.357	0.327	92		0.290	81		30-150	12		30	A
Dieldrin	0.040	0.357	0.354	88		0.325	80		30-150	9		30	A
4,4'-DDE	ND	0.357	0.291	82		0.266	74		30-150	9		30	A
4,4'-DDD	ND	0.357	0.307	86		0.275	77		30-150	11		30	A
4,4'-DDT	ND	0.357	0.313	88		0.279	78		30-150	11		30	A
Endosulfan I	ND	0.357	0.277	78		0.255	71		30-150	8		30	A
Endosulfan II	ND	0.357	0.293	82		0.262	73		30-150	11		30	A
Endosulfan sulfate	ND	0.357	0.346	97		0.299	84		30-150	15		30	A
Methoxychlor	ND	0.357	0.295	83		0.258	72		30-150	13		30	A
cis-Chlordane	0.005J	0.357	0.263	74		0.250	70		30-150	5		30	A
trans-Chlordane	NDIP	0.357	0.281	79		0.261	73		30-150	7		30	A

**Matrix Spike Analysis***Batch Quality Control***Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

<i>Parameter</i>	<i>Native Sample</i>	<i>MS Added</i>	<i>MS Found</i>	<i>MS %Recovery</i>	<i>Qual</i>	<i>MSD Found</i>	<i>MSD %Recovery</i>	<i>Qual</i>	<i>Recovery Limits</i>	<i>RPD</i>	<i>Qual</i>	<i>RPD Limits</i>
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1272024-4 WG1272024-5 QC Sample: L1934250-03 Client ID: BHC3-073119												

<i>Surrogate</i>	<i>MS</i>		<i>MSD</i>		<i>Acceptance Criteria</i>	<i>Column</i>
	<i>% Recovery</i>	<i>Qualifier</i>	<i>% Recovery</i>	<i>Qualifier</i>		
2,4,5,6-Tetrachloro-m-xylene	80		72		30-150	A
Decachlorobiphenyl	78		66		30-150	A
2,4,5,6-Tetrachloro-m-xylene	76		66		30-150	B
Decachlorobiphenyl	66		55		30-150	B

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269345-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Delta-BHC	ND	ND	ug/l	NC		30 A
Lindane	ND	ND	ug/l	NC		30 A
Alpha-BHC	ND	ND	ug/l	NC		30 A
Beta-BHC	ND	ND	ug/l	NC		30 A
Heptachlor	ND	ND	ug/l	NC		30 A
Aldrin	ND	ND	ug/l	NC		30 A
Heptachlor epoxide	0.020	0.020	ug/l	2		30 A
Endrin	ND	ND	ug/l	NC		30 A
Endrin aldehyde	ND	ND	ug/l	NC		30 A
Endrin ketone	ND	ND	ug/l	NC		30 A
Dieldrin	0.021J	0.021J	ug/l	NC		30 A
4,4'-DDE	ND	ND	ug/l	NC		30 A
4,4'-DDD	ND	ND	ug/l	NC		30 A
4,4'-DDT	ND	ND	ug/l	NC		30 A
Endosulfan I	ND	ND	ug/l	NC		30 A
Endosulfan II	ND	ND	ug/l	NC		30 A
Endosulfan sulfate	ND	ND	ug/l	NC		30 A
Methoxychlor	ND	ND	ug/l	NC		30 A
Toxaphene	ND	ND	ug/l	NC		30 A
Chlordane	ND	ND	ug/l	NC		30 A
cis-Chlordane	ND	ND	ug/l	NC		30 A



**Lab Duplicate Analysis**

Batch Quality Control

Project Name: DECATUR AL-MEYERS BROWN

Project Number: 190780-01.01

Lab Number: L1934250

Report Date: 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269345-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
trans-Chlordane	NDIP	ND	ug/l	NC		30 A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	34		35		30-150	A
Decachlorobiphenyl	<b>27</b>	Q	30		30-150	A
2,4,5,6-Tetrachloro-m-xylene	32		33		30-150	B
Decachlorobiphenyl	<b>23</b>	Q	<b>25</b>	Q	30-150	B

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269658-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
MCPP	ND	ND	ug/l	NC		25 A
MCPA	ND	ND	ug/l	NC		25 A
Dalapon	ND	ND	ug/l	NC		25 A
Dicamba	ND	ND	ug/l	NC		25 A
Dichloroprop	ND	ND	ug/l	NC		25 A
2,4-D	ND	ND	ug/l	NC		25 A
2,4-DB	ND	ND	ug/l	NC		25 A
2,4,5-T	ND	ND	ug/l	NC		25 A
2,4,5-TP (Silvex)	ND	ND	ug/l	NC		25 A
Dinoseb	ND	ND	ug/l	NC		25 A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	61		93		30-150	A
DCAA	66		89		30-150	B

# **Lab Duplicate Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1272024-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
Delta-BHC	ND	ND	ug/l	NC		30 A
Lindane	ND	ND	ug/l	NC		30 A
Alpha-BHC	ND	ND	ug/l	NC		30 A
Beta-BHC	ND	ND	ug/l	NC		30 A
Heptachlor	ND	ND	ug/l	NC		30 A
Aldrin	ND	ND	ug/l	NC		30 A
Heptachlor epoxide	0.033	0.040	ug/l	19		30 A
Endrin	ND	ND	ug/l	NC		30 A
Endrin aldehyde	ND	ND	ug/l	NC		30 A
Endrin ketone	ND	ND	ug/l	NC		30 A
Dieldrin	0.040	0.045	ug/l	12		30 A
4,4'-DDE	ND	ND	ug/l	NC		30 A
4,4'-DDD	ND	ND	ug/l	NC		30 A
4,4'-DDT	ND	ND	ug/l	NC		30 A
Endosulfan I	ND	ND	ug/l	NC		30 A
Endosulfan II	ND	ND	ug/l	NC		30 A
Endosulfan sulfate	ND	ND	ug/l	NC		30 A
Methoxychlor	ND	ND	ug/l	NC		30 A
Toxaphene	ND	ND	ug/l	NC		30 A
Chlordane	ND	ND	ug/l	NC		30 A
cis-Chlordane	0.005J	ND	ug/l	NC		30 A

**Lab Duplicate Analysis**

Batch Quality Control

Project Name: DECATUR AL-MEYERS BROWN

Project Number: 190780-01.01

Lab Number: L1934250

Report Date: 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1272024-6 QC Sample: L1934250-03 Client ID: BHC3-073119						
trans-Chlordane	NDIP	NDIP	ug/l	NC		30 A

Surrogate	%Recovery	Qualifier	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	79		83		30-150	A
Decachlorobiphenyl	74		77		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		78		30-150	B
Decachlorobiphenyl	67		65		30-150	B



## METALS

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Aluminum, Total	0.0154		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Antimony, Total	0.00085	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00043	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Barium, Total	0.07381		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Boron, Total	0.0481		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:51	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Calcium, Total	66.0		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Copper, Total	0.00178		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Iron, Total	0.752		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Magnesium, Total	3.92		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Manganese, Total	0.01517		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Mercury, Total	0.00001	J	mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:34	EPA 7474	1,7474	BV
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Potassium, Total	2.58		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Sodium, Total	6.01		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
Zinc, Total	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 13:44	EPA 3005A	1,6020B	AM
<b>Dissolved Metals - Mansfield Lab</b>											
Aluminum, Dissolved	0.00491	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00043	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00036	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-01

Date Collected: 07/31/19 10:37

Client ID: BHC1-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.06853		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0480		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:15	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Calcium, Dissolved	64.8		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00167		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.309		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	3.83		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.00110		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:18	EPA 7474	1,7474	BV
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Potassium, Dissolved	2.48		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Sodium, Dissolved	5.92		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:02	EPA 3005A	1,6020B	AM





Project Name: DECATUR AL-MEYERS BROWN

Lab Number: L1934250

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934250-02

Date Collected: 07/31/19 12:25

Client ID: BHC2-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.0309		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Antimony, Total	0.00061	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00044	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Barium, Total	0.1049		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Boron, Total	0.0387		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:56	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Calcium, Total	75.8		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Copper, Total	0.00250		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Iron, Total	0.894		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Lead, Total	0.00039	J	mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Magnesium, Total	3.72		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Manganese, Total	0.09550		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Mercury, Total	0.00001	J	mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:37	EPA 7474	1,7474	BV
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Potassium, Total	2.19		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Sodium, Total	6.74		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Zinc, Total	0.00378	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 13:49	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.00728	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00115	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00027	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM





**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-02

Date Collected: 07/31/19 12:25

Client ID: BHC2-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.06994		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0375		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:20	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Calcium, Dissolved	73.5		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00132		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.136		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	3.72		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.00366		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:21	EPA 7474	1,7474	BV
Molybdenum, Dissolved	0.00118	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Potassium, Dissolved	1.97		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Sodium, Dissolved	6.85		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Thallium, Dissolved	0.00047	J	mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:34	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-03

Date Collected: 07/31/19 14:14

Client ID: BHC3-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Aluminum, Total	0.00575	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Antimony, Total	0.00153	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00024	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Barium, Total	0.07583		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Boron, Total	0.0246		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:47	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00006	J	mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Calcium, Total	81.5		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00025	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Copper, Total	0.00044	J	mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Iron, Total	0.0717		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Magnesium, Total	3.40		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Manganese, Total	0.2274		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Mercury, Total	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:54	EPA 7474	1,7474	BV
Molybdenum, Total	0.00085	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Potassium, Total	1.65		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Sodium, Total	4.12		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
Zinc, Total	0.00421	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 13:39	EPA 3005A	1,6020B	AM
<b>Dissolved Metals - Mansfield Lab</b>											
Aluminum, Dissolved	0.00395	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00051	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM





**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-03

Date Collected: 07/31/19 14:14

Client ID: BHC3-073119

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.07545		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0256		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:11	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	0.00009	J	mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Calcium, Dissolved	79.7		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00023	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0629		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	3.32		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.2147		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 11:34	EPA 7474	1,7474	BV
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Potassium, Dissolved	1.56		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Sodium, Dissolved	4.08		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00344	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 11:57	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-04

Date Collected: 07/31/19 14:35

Client ID: BHC3-073119FD

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Aluminum, Total	0.00505	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Barium, Total	0.07642		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Boron, Total	0.0238		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 12:00	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00006	J	mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Calcium, Total	81.8		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00024	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Iron, Total	0.0703		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Magnesium, Total	3.31		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Manganese, Total	0.2149		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Mercury, Total	0.00001	J	mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:39	EPA 7474	1,7474	BV
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Potassium, Total	1.52		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Sodium, Total	3.99		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
Zinc, Total	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 13:53	EPA 3005A	1,6020B	AM
<b>Dissolved Metals - Mansfield Lab</b>											
Aluminum, Dissolved	0.00353	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00051	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM





**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934250-04

Date Collected: 07/31/19 14:35

Client ID: BHC3-073119FD

Date Received: 08/01/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.07524		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0286		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:56	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	0.00006	J	mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Calcium, Dissolved	80.5		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00017	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0461	J	mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	3.36		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.2018		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:23	EPA 7474	1,7474	BV
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Potassium, Dissolved	1.48		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Sodium, Dissolved	4.16		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Thallium, Dissolved	0.00017	J	mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:38	EPA 3005A	1,6020B	AM



Project Name: DECATUR AL-MEYERS BROWN

Lab Number: L1934250

Project Number: 190780-01.01

Report Date: 08/15/19

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270675-1										
Mercury, Total	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:49	1,7474	BV

### Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270676-1										
Aluminum, Dissolved	0.00331	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Barium, Dissolved	ND		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Boron, Dissolved	0.00354	J	mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 09:43	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Calcium, Dissolved	ND		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Magnesium, Dissolved	ND		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Manganese, Dissolved	ND		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Potassium, Dissolved	ND		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Sodium, Dissolved	ND		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM



Project Name: DECATUR AL-MEYERS BROWN

Lab Number: L1934250

Project Number: 190780-01.01

Report Date: 08/15/19

## Method Blank Analysis Batch Quality Control

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270678-1										
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 11:29	1,7474	BV

### Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270683-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Barium, Total	ND		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Boron, Total	0.00160	J	mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:38	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Calcium, Total	ND		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Manganese, Total	ND		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Potassium, Total	ND		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM





**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

### Method Blank Analysis Batch Quality Control

Sodium, Total	ND	mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Thallium, Total	ND	mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Vanadium, Total	ND	mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Zinc, Total	ND	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM

#### Prep Information

Digestion Method: EPA 3005A





**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270675-2 SRM Lot Number: HPHGAF								
Mercury, Total	94		-		80-120	-		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Lab Number:** L1934250

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270676-2					
Aluminum, Dissolved	102	-	80-120	-	20
Antimony, Dissolved	90	-	80-120	-	20
Arsenic, Dissolved	84	-	80-120	-	20
Barium, Dissolved	100	-	80-120	-	20
Beryllium, Dissolved	101	-	80-120	-	20
Boron, Dissolved	95	-	80-120	-	20
Cadmium, Dissolved	97	-	80-120	-	20
Calcium, Dissolved	98	-	80-120	-	20
Chromium, Dissolved	96	-	80-120	-	20
Cobalt, Dissolved	96	-	80-120	-	20
Copper, Dissolved	91	-	80-120	-	20
Iron, Dissolved	113	-	80-120	-	20
Lead, Dissolved	103	-	80-120	-	20
Magnesium, Dissolved	101	-	80-120	-	20
Manganese, Dissolved	98	-	80-120	-	20
Molybdenum, Dissolved	95	-	80-120	-	20
Nickel, Dissolved	98	-	80-120	-	20
Potassium, Dissolved	103	-	80-120	-	20
Selenium, Dissolved	106	-	80-120	-	20
Silver, Dissolved	98	-	80-120	-	20
Sodium, Dissolved	97	-	80-120	-	20

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270676-2					
Thallium, Dissolved	102	-	80-120	-	20
Vanadium, Dissolved	100	-	80-120	-	20
Zinc, Dissolved	100	-	80-120	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270678-2 SRM Lot Number: HPHGAF					
Mercury, Dissolved	100	-	80-120	-	20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Lab Number:** L1934250

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270683-2					
Aluminum, Total	104	-	80-120	-	20
Antimony, Total	96	-	80-120	-	20
Arsenic, Total	88	-	80-120	-	20
Barium, Total	103	-	80-120	-	20
Beryllium, Total	100	-	80-120	-	20
Boron, Total	97	-	80-120	-	20
Cadmium, Total	103	-	80-120	-	20
Calcium, Total	104	-	80-120	-	20
Chromium, Total	100	-	80-120	-	20
Cobalt, Total	98	-	80-120	-	20
Copper, Total	92	-	80-120	-	20
Iron, Total	116	-	80-120	-	20
Lead, Total	107	-	80-120	-	20
Magnesium, Total	103	-	80-120	-	20
Manganese, Total	102	-	80-120	-	20
Molybdenum, Total	97	-	80-120	-	20
Nickel, Total	100	-	80-120	-	20
Potassium, Total	104	-	80-120	-	20
Selenium, Total	110	-	80-120	-	20
Silver, Total	100	-	80-120	-	20
Sodium, Total	99	-	80-120	-	20



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Lab Number:** L1934250

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270683-2					
Thallium, Total	105	-	80-120	-	20
Vanadium, Total	100	-	80-120	-	20
Zinc, Total	111	-	80-120	-	20

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270675-3 WG1270675-4 QC Sample: L1934250-03 Client ID: BHC3-073119												
Mercury, Total	ND	0.0025	0.00230	92		0.00234	94		80-120	2		20

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-3 WG1270676-4 QC Sample: L1934250-03 Client ID: BHC3-073119									
Aluminum, Dissolved	0.00395J	4	4.19	105	4.20	105	75-125	0	20
Antimony, Dissolved	0.00051J	1	0.9391	94	0.9299	93	75-125	1	20
Arsenic, Dissolved	ND	0.24	0.2463	103	0.2526	105	75-125	3	20
Barium, Dissolved	0.07545	4	4.326	106	4.286	105	75-125	1	20
Beryllium, Dissolved	ND	0.1	0.1055	106	0.09404	94	75-125	11	20
Boron, Dissolved	0.0256	2	1.99	98	2.10	104	75-125	5	20
Cadmium, Dissolved	0.00009J	0.102	0.1091	107	0.1068	105	75-125	2	20
Calcium, Dissolved	79.7	20	102	112	102	112	75-125	0	20
Chromium, Dissolved	ND	0.4	0.408	102	0.397	99	75-125	3	20
Cobalt, Dissolved	0.00023J	1	1.018	102	1.013	101	75-125	0	20
Copper, Dissolved	ND	0.5	0.481	96	0.476	95	75-125	1	20
Iron, Dissolved	0.0629	2	2.33	113	2.18	106	75-125	7	20
Lead, Dissolved	ND	1.02	1.10	108	1.10	108	75-125	0	20
Magnesium, Dissolved	3.32	20	24.5	106	24.2	104	75-125	1	20
Manganese, Dissolved	0.2147	1	1.238	102	1.207	99	75-125	3	20
Molybdenum, Dissolved	ND	2	2.008	100	2.011	100	75-125	0	20
Nickel, Dissolved	ND	1	1.026	103	1.011	101	75-125	1	20
Potassium, Dissolved	1.56	20	22.9	107	22.4	104	75-125	2	20
Selenium, Dissolved	ND	0.24	0.255	106	0.260	108	75-125	2	20
Silver, Dissolved	ND	0.1	0.1030	103	0.09903	99	75-125	4	20
Sodium, Dissolved	4.08	20	24.9	104	24.5	102	75-125	2	20

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-3 WG1270676-4 QC Sample: L1934250-03 Client ID: BHC3-073119									
Thallium, Dissolved	ND	0.24	0.2571	107	0.2571	107	75-125	0	20
Vanadium, Dissolved	ND	1	1.05	105	1.04	104	75-125	1	20
Zinc, Dissolved	0.00344J	1	1.05	105	1.05	105	75-125	0	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270678-3 WG1270678-4 QC Sample: L1934250-03 Client ID: BHC3-073119									
Mercury, Dissolved	ND	0.0025	0.00234	94	0.00247	99	80-120	5	20



# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 073119 QC Batch ID: WG1270683-3 WG1270683-4 QC Sample: L1934250-03 Client ID: BHC3-									
Aluminum, Total	0.00575J	4	4.07	102	3.96	99	75-125	3	20
Antimony, Total	0.00153J	1	0.8865	89	0.8643	86	75-125	3	20
Arsenic, Total	0.00024J	0.24	0.2463	103	0.2447	102	75-125	1	20
Barium, Total	0.07583	4	4.322	106	4.174	102	75-125	3	20
Beryllium, Total	ND	0.1	0.1032	103	0.1009	101	75-125	2	20
Boron, Total	0.0246	2	2.04	101	2.06	102	75-125	1	20
Cadmium, Total	0.00006J	0.102	0.1070	105	0.1028	101	75-125	4	20
Calcium, Total	81.5	20	102	102	100	92	75-125	2	20
Chromium, Total	ND	0.4	0.404	101	0.393	98	75-125	3	20
Cobalt, Total	0.00025J	1	1.012	101	0.9742	97	75-125	4	20
Copper, Total	0.00044J	0.5	0.480	96	0.462	92	75-125	4	20
Iron, Total	0.0717	2	2.26	109	2.05	99	75-125	10	20
Lead, Total	ND	1.02	1.10	108	1.09	107	75-125	1	20
Magnesium, Total	3.40	20	23.9	102	23.2	99	75-125	3	20
Manganese, Total	0.2274	1	1.246	102	1.224	100	75-125	2	20
Molybdenum, Total	0.00085J	2	2.040	102	1.955	98	75-125	4	20
Nickel, Total	ND	1	0.9984	100	0.9631	96	75-125	4	20
Potassium, Total	1.65	20	22.6	105	21.7	100	75-125	4	20
Selenium, Total	ND	0.24	0.262	109	0.255	106	75-125	3	20
Silver, Total	ND	0.1	0.1025	102	0.09760	98	75-125	5	20
Sodium, Total	4.12	20	24.2	100	23.7	98	75-125	2	20

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-3 WG1270683-4 QC Sample: L1934250-03 Client ID: BHC3-073119									
Thallium, Total	ND	0.24	0.2582	108	0.2536	106	75-125	2	20
Vanadium, Total	ND	1	1.03	103	0.996	100	75-125	3	20
Zinc, Total	0.00421J	1	1.03	103	1.00	100	75-125	3	20

**Lab Duplicate Analysis***Batch Quality Control***Project Name:** DECATUR AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934250**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270675-5 QC Sample: L1934250-03 Client ID: BHC3-073119						
Mercury, Total	ND	ND	mg/l	NC		20

# **Lab Duplicate Analysis** **Batch Quality Control**

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Aluminum, Dissolved	0.00395J	0.00403J	mg/l	NC	20
Antimony, Dissolved	0.00051J	0.00078J	mg/l	NC	20
Arsenic, Dissolved	ND	0.00024J	mg/l	NC	20
Barium, Dissolved	0.07545	0.07337	mg/l	3	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	0.00009J	0.00006J	mg/l	NC	20
Calcium, Dissolved	79.7	78.9	mg/l	1	20
Chromium, Dissolved	ND	ND	mg/l	NC	20
Cobalt, Dissolved	0.00023J	0.00018J	mg/l	NC	20
Copper, Dissolved	ND	0.00044J	mg/l	NC	20
Iron, Dissolved	0.0629	0.103	mg/l	48	Q 20
Lead, Dissolved	ND	ND	mg/l	NC	20
Magnesium, Dissolved	3.32	3.26	mg/l	2	20
Manganese, Dissolved	0.2147	0.2075	mg/l	3	20
Molybdenum, Dissolved	ND	0.00067J	mg/l	NC	20
Nickel, Dissolved	ND	ND	mg/l	NC	20
Potassium, Dissolved	1.56	1.51	mg/l	3	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20



# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Sodium, Dissolved	4.08	3.92	mg/l	4	20
Thallium, Dissolved	ND	0.00016J	mg/l	NC	20
Vanadium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.00344J	ND	mg/l	NC	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Boron, Dissolved	0.0256	0.0269	mg/l	5	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270678-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Mercury, Dissolved	ND	0.00001J	mg/l	NC	20

# Lab Duplicate Analysis

Batch Quality Control

Project Name: DECATUR AL-MEYERS BROWN

Project Number: 190780-01.01

Lab Number: L1934250

Report Date: 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Aluminum, Total	0.00575J	0.00401J	mg/l	NC	20
Antimony, Total	0.00153J	0.00369J	mg/l	NC	20
Arsenic, Total	0.00024J	ND	mg/l	NC	20
Barium, Total	0.07583	0.07683	mg/l	1	20
Beryllium, Total	ND	ND	mg/l	NC	20
Cadmium, Total	0.00006J	0.00006J	mg/l	NC	20
Calcium, Total	81.5	79.4	mg/l	3	20
Chromium, Total	ND	ND	mg/l	NC	20
Cobalt, Total	0.00025J	0.00018J	mg/l	NC	20
Copper, Total	0.00044J	ND	mg/l	NC	20
Iron, Total	0.0717	0.0626	mg/l	14	20
Lead, Total	ND	ND	mg/l	NC	20
Magnesium, Total	3.40	3.31	mg/l	3	20
Manganese, Total	0.2274	0.2010	mg/l	12	20
Molybdenum, Total	0.00085J	0.00250	mg/l	NC	20
Nickel, Total	ND	ND	mg/l	NC	20
Potassium, Total	1.65	1.51	mg/l	9	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Sodium, Total	4.12	3.97	mg/l	4	20
Thallium, Total	ND	0.00019J	mg/l	NC	20
Vanadium, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.00421J	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: BHC3-073119					
Boron, Total	0.0246	0.0241	mg/l	2	20

# **INORGANICS & MISCELLANEOUS**



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-01  
**Client ID:** BHC1-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 10:37  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	40.		mg/l	10	NA	2	-	08/02/19 12:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/04/19 15:30	08/05/19 10:09	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	1.1		mg/l	0.10	0.033	1	-	08/02/19 19:04	44,353.2	MR
Chemical Oxygen Demand	19.	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
COD, Soluble	7.8	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:18	44,410.4	TL
Total Organic Carbon	3.8		mg/l	0.50	0.11	1	-	08/08/19 09:04	1,9060A	DW
Dissolved Organic Carbon	4.2		mg/l	1.0	0.04	1	08/01/19 23:55	08/08/19 10:47	1,9060A	DW



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-02  
**Client ID:** BHC2-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 12:25  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	9.2		mg/l	5.0	NA	1	-	08/02/19 12:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/04/19 15:30	08/05/19 10:10	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	1.6		mg/l	0.10	0.033	1	-	08/02/19 19:05	44,353.2	MR
Chemical Oxygen Demand	17.	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
COD, Soluble	7.8	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:18	44,410.4	TL
Total Organic Carbon	2.4		mg/l	0.50	0.11	1	-	08/08/19 09:31	1,9060A	DW
Dissolved Organic Carbon	3.1		mg/l	1.0	0.04	1	08/01/19 23:55	08/08/19 11:13	1,9060A	DW



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-03  
**Client ID:** BHC3-073119  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:14  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/02/19 12:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/04/19 15:30	08/05/19 10:11	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	1.7		mg/l	0.10	0.033	1	-	08/02/19 19:06	44,353.2	MR
Chemical Oxygen Demand	21.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
COD, Soluble	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:18	44,410.4	TL
Total Organic Carbon	1.4		mg/l	0.50	0.11	1	-	08/08/19 09:56	1,9060A	DW
Dissolved Organic Carbon	1.6		mg/l	1.0	0.04	1	08/01/19 23:55	08/08/19 11:38	1,9060A	DW



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934250-04  
**Client ID:** BHC3-073119FD  
**Sample Location:** ALABAMA

**Date Collected:** 07/31/19 14:35  
**Date Received:** 08/01/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/02/19 12:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/04/19 15:30	08/05/19 10:18	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	1.8		mg/l	0.10	0.033	1	-	08/02/19 19:10	44,353.2	MR
Chemical Oxygen Demand	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
COD, Soluble	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:19	44,410.4	TL
Total Organic Carbon	1.2		mg/l	0.50	0.11	1	-	08/08/19 10:20	1,9060A	DW
Dissolved Organic Carbon	1.5		mg/l	1.0	0.04	1	08/01/19 23:55	08/08/19 12:03	1,9060A	DW





Project Name: DECATUR AL-MEYERS BROWN

Lab Number: L1934250

Project Number: 190780-01.01

Report Date: 08/15/19

### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1267801-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/02/19 12:55	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1268030-1										
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.033	1	-	08/02/19 18:10	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1268451-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/04/19 15:30	08/05/19 09:41	1,9010C/9012B	LH
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269294-1										
Chemical Oxygen Demand	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269295-1										
COD, Soluble	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1270173-1										
Dissolved Organic Carbon	0.18	J	mg/l	1.0	0.04	1	08/01/19 23:55	08/08/19 13:35	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1270174-1										
Total Organic Carbon	ND		mg/l	0.50	0.11	1	-	08/08/19 07:59	1,9060A	DW



## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1268030-2								
Nitrogen, Nitrate/Nitrite	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1268451-2 WG1268451-3								
Cyanide, Total	102		104		85-115	2		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1269294-2								
Chemical Oxygen Demand	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1269295-2								
COD, Soluble	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1270173-2								
Dissolved Organic Carbon	105		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1270174-2								
Total Organic Carbon	105		-		90-110	-		

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268030-4 QC Sample: L1934250-03 Client ID: BHC3-073119												
Nitrogen, Nitrate/Nitrite	1.7	4	5.6	98		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268451-4 WG1268451-5 QC Sample: L1934250-03 Client ID: BHC3-073119												
Cyanide, Total	ND	0.2	0.183	92		0.185	92		80-120	1		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269294-3 QC Sample: L1934250-03 Client ID: BHC3-073119												
Chemical Oxygen Demand	21.	238	250	98		-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269295-3 QC Sample: L1934250-03 Client ID: BHC3-073119												
COD, Soluble	ND	238	260	110		-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1270173-4 QC Sample: L1934250-03 Client ID: BHC3-073119												
Dissolved Organic Carbon	1.6	8	10	110		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1270174-4 QC Sample: L1934250-03 Client ID: BHC3-073119												
Total Organic Carbon	1.4	8	7.6	78	Q	-	-		80-120	-		20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934250

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1267801-2	QC Sample: L1934250-03	Client ID: BHC3-073119		
Solids, Total Suspended	ND	ND	mg/l	NC		29
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1268030-3	QC Sample: L1934250-03	Client ID: BHC3-073119		
Nitrogen, Nitrate/Nitrite	1.7	1.7	mg/l	0		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1269294-4	QC Sample: L1934250-03	Client ID: BHC3-073119		
Chemical Oxygen Demand	21.	14.J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1269295-4	QC Sample: L1934250-03	Client ID: BHC3-073119		
COD, Soluble	ND	10.J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1270173-3	QC Sample: L1934250-03	Client ID: BHC3-073119		
Dissolved Organic Carbon	1.6	1.2	mg/l	29	Q	20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1270174-3	QC Sample: L1934250-03	Client ID: BHC3-073119		
Total Organic Carbon	1.4	1.2	mg/l	15		20



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

Serial\_No:08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Sample Receipt and Container Information**

Were project specific reporting limits specified? YES

**Cooler Information**

Cooler	Custody Seal
A	Absent
B	Absent
C	Absent

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-01A	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-01B	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-01C	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-01D	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-01E	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-01F	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-01G	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)
L1934250-01H	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)
L1934250-01I	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)
L1934250-01J	Plastic 120ml HNO3 preserved	B	<2	<2	5.4	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-01K	Plastic 120ml unpreserved	B	7	7	5.4	Y	Absent		-
L1934250-01L	Plastic 120ml unpreserved	B	7	7	5.4	Y	Absent		SCOD-410(28)
L1934250-01M	Plastic 250ml NaOH preserved	B	>12	>12	5.4	Y	Absent		TCN-9010(14)
L1934250-01N	Plastic 120ml H2SO4 preserved	B	<2	<2	5.4	Y	Absent		NO3/NO2-353(28),COD-410(28)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-01O	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PEST-8081(7)
L1934250-01P	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PEST-8081(7)
L1934250-01Q	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PCB-8082-LVI(7)
L1934250-01R	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PCB-8082-LVI(7)
L1934250-01S	Amber 250ml unpreserved	B	7	7	5.4	Y	Absent		8270TCL-LVI(7)
L1934250-01T	Amber 250ml unpreserved	B	7	7	5.4	Y	Absent		8270TCL-LVI(7)
L1934250-01U	Plastic 950ml unpreserved	B	7	7	5.4	Y	Absent		TSS-2540(7)
L1934250-01V	Amber 1000ml unpreserved	B	7	7	5.4	Y	Absent		HERB-8151(7)
L1934250-01W	Amber 1000ml unpreserved	B	7	7	5.4	Y	Absent		HERB-8151(7)
L1934250-01X	Plastic 120ml HNO3 preserved Filtrates	B	NA		5.4	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934250-01Y	Plastic 250ml H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		SCOD-410(28)
L1934250-01Z	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-01Z1	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-01Z2	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02A	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-02B	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-02C	Vial HCl preserved	B	NA		5.4	Y	Absent		8260(14)
L1934250-02D	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02E	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02F	Vial unpreserved	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02G	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)
L1934250-02H	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-02I	Vial H2SO4 preserved	B	NA		5.4	Y	Absent		TOC-9060(28)
L1934250-02J	Plastic 120ml HNO3 preserved	B	<2	<2	5.4	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-02K	Plastic 120ml unpreserved	B	7	7	5.4	Y	Absent		-
L1934250-02L	Plastic 120ml unpreserved	B	7	7	5.4	Y	Absent		SCOD-410(28)
L1934250-02M	Plastic 250ml NaOH preserved	B	>12	>12	5.4	Y	Absent		TCN-9010(14)
L1934250-02N	Plastic 120ml H2SO4 preserved	B	<2	<2	5.4	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934250-02O	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PEST-8081(7)
L1934250-02P	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PEST-8081(7)
L1934250-02Q	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PCB-8082-LVI(7)
L1934250-02R	Amber 120ml unpreserved	B	7	7	5.4	Y	Absent		PCB-8082-LVI(7)
L1934250-02S	Amber 250ml unpreserved	B	7	7	5.4	Y	Absent		8270TCL-LVI(7)
L1934250-02T	Amber 250ml unpreserved	B	7	7	5.4	Y	Absent		8270TCL-LVI(7)
L1934250-02U	Plastic 950ml unpreserved	B	7	7	5.4	Y	Absent		TSS-2540(7)
L1934250-02V	Amber 1000ml unpreserved	B	7	7	5.4	Y	Absent		HERB-8151(7)
L1934250-02W	Amber 1000ml unpreserved	B	7	7	5.4	Y	Absent		HERB-8151(7)
L1934250-02X	Plastic 120ml HNO3 preserved Filtrates	B	NA		5.4	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1934250-02Y	Plastic 250ml H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		SCOD-410(28)
L1934250-02Z	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02Z1	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-02Z2	Vial H2SO4 preserved Filtrates	B	NA		5.4	Y	Absent		DOC-9060(28)
L1934250-03A	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03A1	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03A2	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03B	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03B1	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03B2	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03C	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03C1	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03C2	Vial HCl preserved	C	NA		3.2	Y	Absent		8260(14)
L1934250-03D	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03D1	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03D2	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03E	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03E1	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03E2	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03F	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03F1	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03F2	Vial unpreserved	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03G	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03G1	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03G2	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03H	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03H1	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03H2	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-03I	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03I1	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03I2	Vial H2SO4 preserved	C	NA		3.2	Y	Absent		TOC-9060(28)
L1934250-03J	Plastic 120ml HNO3 preserved	C	<2	<2	3.2	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-03J1	Plastic 120ml HNO3 preserved	C	<2	<2	3.2	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-03J2	Plastic 120ml HNO3 preserved	C	<2	<2	3.2	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-03K	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		-
L1934250-03K1	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		-

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

Serial\_No:08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-03K2	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		-
L1934250-03L	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		SCOD-410(28)
L1934250-03L1	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		SCOD-410(28)
L1934250-03L2	Plastic 120ml unpreserved	C	7	7	3.2	Y	Absent		SCOD-410(28)
L1934250-03M	Plastic 250ml NaOH preserved	C	>12	>12	3.2	Y	Absent		TCN-9010(14)
L1934250-03M1	Plastic 250ml NaOH preserved	C	>12	>12	3.2	Y	Absent		TCN-9010(14)
L1934250-03M2	Plastic 250ml NaOH preserved	C	>12	>12	3.2	Y	Absent		TCN-9010(14)
L1934250-03N	Plastic 120ml H2SO4 preserved	C	<2	<2	3.2	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934250-03N1	Plastic 120ml H2SO4 preserved	C	<2	<2	3.2	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934250-03N2	Plastic 120ml H2SO4 preserved	C	<2	<2	3.2	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934250-03O	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03O1	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03O2	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03P	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03P1	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03P2	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PEST-8081(7)
L1934250-03Q	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03Q1	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03Q2	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03R	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03R1	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03R2	Amber 120ml unpreserved	C	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934250-03S	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934250-03S1	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934250-03S2	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934250-03T	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934250-03T1	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934250-03T2	Amber 250ml unpreserved	C	7	7	3.2	Y	Absent		8270TCL-LVI(7)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-03U	Plastic 950ml unpreserved	C	7	7	3.2	Y	Absent		TSS-2540(7)
L1934250-03U1	Plastic 950ml unpreserved	C	7	7	3.2	Y	Absent		TSS-2540(7)
L1934250-03U2	Plastic 950ml unpreserved	C	7	7	3.2	Y	Absent		TSS-2540(7)
L1934250-03V	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03V1	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03V2	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03W	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03W1	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03W2	Amber 1000ml unpreserved	C	7	7	3.2	Y	Absent		HERB-8151(7)
L1934250-03X	Plastic 120ml HNO3 preserved Filtrates	C	NA		3.2	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934250-03X1	Plastic 120ml HNO3 preserved Filtrates	C	NA		3.2	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-03X2	Plastic 120ml HNO3 preserved Filtrates	C	NA		3.2	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934250-03Y	Plastic 250ml H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		SCOD-410(28)
L1934250-03Y1	Plastic 250ml H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		SCOD-410(28)
L1934250-03Y2	Plastic 250ml H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		SCOD-410(28)
L1934250-03Z	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z1	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z2	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z3	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z4	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z5	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z6	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z7	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-03Z8	Vial H2SO4 preserved Filtrates	C	NA		3.2	Y	Absent		DOC-9060(28)
L1934250-04A	Vial HCl preserved	A	NA		2.2	Y	Absent		8260(14)
L1934250-04B	Vial HCl preserved	A	NA		2.2	Y	Absent		8260(14)
L1934250-04C	Vial HCl preserved	A	NA		2.2	Y	Absent		8260(14)
L1934250-04D	Vial unpreserved	A	NA		2.2	Y	Absent		DOC-9060(28)
L1934250-04E	Vial unpreserved	A	NA		2.2	Y	Absent		DOC-9060(28)
L1934250-04F	Vial unpreserved	A	NA		2.2	Y	Absent		DOC-9060(28)
L1934250-04G	Vial H2SO4 preserved	A	NA		2.2	Y	Absent		TOC-9060(28)
L1934250-04H	Vial H2SO4 preserved	A	NA		2.2	Y	Absent		TOC-9060(28)
L1934250-04I	Vial H2SO4 preserved	A	NA		2.2	Y	Absent		TOC-9060(28)

\*Values in parentheses indicate holding time in days



**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934250-04J	Plastic 120ml HNO3 preserved	A	<2	<2	2.2	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934250-04K	Plastic 120ml unpreserved	A	7	7	2.2	Y	Absent		-
L1934250-04L	Plastic 120ml unpreserved	A	7	7	2.2	Y	Absent		SCOD-410(28)
L1934250-04M	Plastic 250ml NaOH preserved	A	>12	>12	2.2	Y	Absent		TCN-9010(14)
L1934250-04N	Plastic 120ml H2SO4 preserved	A	<2	<2	2.2	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934250-04O	Amber 120ml unpreserved	A	7	7	2.2	Y	Absent		PEST-8081(7)
L1934250-04P	Amber 120ml unpreserved	A	7	7	2.2	Y	Absent		PEST-8081(7)
L1934250-04Q	Amber 120ml unpreserved	A	7	7	2.2	Y	Absent		PCB-8082-LVI(7)
L1934250-04R	Amber 120ml unpreserved	A	7	7	2.2	Y	Absent		PCB-8082-LVI(7)
L1934250-04S	Amber 250ml unpreserved	A	7	7	2.2	Y	Absent		8270TCL-LVI(7)
L1934250-04T	Amber 250ml unpreserved	A	7	7	2.2	Y	Absent		8270TCL-LVI(7)
L1934250-04U	Plastic 950ml unpreserved	A	7	7	2.2	Y	Absent		TSS-2540(7)
L1934250-04V	Amber 1000ml unpreserved	A	7	7	2.2	Y	Absent		HERB-8151(7)
L1934250-04W	Amber 1000ml unpreserved	A	7	7	2.2	Y	Absent		HERB-8151(7)
L1934250-04X	Plastic 120ml HNO3 preserved Filtrates	A	NA		2.2	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934250-04Y	Plastic 250ml H2SO4 preserved Filtrates	A	NA		2.2	Y	Absent		SCOD-410(28)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

Serial\_No:08151911:20  
**Lab Number:** L1934250  
**Report Date:** 08/15/19

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1934250-04Z	Vial H2SO4 preserved Filtrates	A	NA		2.2	Y	Absent		DOC-9060(28)
L1934250-04Z1	Vial H2SO4 preserved Filtrates	A	NA		2.2	Y	Absent		DOC-9060(28)
L1934250-04Z2	Vial H2SO4 preserved Filtrates	A	NA		2.2	Y	Absent		DOC-9060(28)

**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

*Report Format: DU Report with 'J' Qualifiers*



**Project Name:** DECATUR AL-MEYERS BROWN**Lab Number:** L1934250**Project Number:** 190780-01.01**Report Date:** 08/15/19

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

**Terms**

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

**Data Qualifiers**

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers





**Project Name:** DECATUR AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934250  
**Report Date:** 08/15/19

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

### Westborough Facility

EPA 624/624.1: m/p-xylene, o-xylene

EPA 8260C: NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

EPA 8270D: NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

SM4500: NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

### Mansfield Facility

SM 2540D: TSS

EPA 8082A: NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

EPA TO-15: Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

Biological Tissue Matrix: EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

### Westborough Facility:

#### Drinking Water

EPA 300.0: Chloride, Nitrate-N, Fluoride, Sulfate; EPA 353.2: Nitrate-N, Nitrite-N; SM4500NO3-F: Nitrate-N, Nitrite-N; SM4500F-C, SM4500CN-CE,

EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B

EPA 332: Perchlorate; EPA 524.2: THMs and VOCs; EPA 504.1: EDB, DBCP.

Microbiology: SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.

#### Non-Potable Water

SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH: Ammonia-N and Kjeldahl-N, EPA 350.1:

Ammonia-N, LACHAT 10-107-06-1-B: Ammonia-N, EPA 351.1, SM4500NO3-F, EPA 353.2: Nitrate-N, SM4500P-E, SM4500P-B, E, SM4500SO4-E,

SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300: Chloride, Sulfate, Nitrate.

EPA 624.1: Volatile Halocarbons & Aromatics,

EPA 608.3: Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II,

Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

EPA 625.1: SVOC (Acid/Base/Neutral Extractables), EPA 600/4-81-045: PCB-Oil.

Microbiology: SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.

### Mansfield Facility:

#### Drinking Water

EPA 200.7: Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. EPA 200.8: Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. EPA 245.1 Hg.

EPA 522.

#### Non-Potable Water

EPA 200.7: Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

EPA 200.8: Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

EPA 245.1 Hg.

SM2340B

For a complete listing of analytes and methods, please contact your Alpha Project Manager.

PAGE 1 OF 1

08/01/19

ALPHA Job #: L1934250

8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-823-9300

## Project Information

Project Name: Decatur, AL - Meyers Brown

### Report Information - Data Deliverables

☐ ADEx      ☐ EMAIL

### Billing Information

Same as Client Info	PO #:
---	-------

### Client Information

Client: Anchor QFA

Address: 1201 3rd Ave  
Ste. 2600

Phone: Cindy Fields

Email:

**Additional Project Information:**

Project Location: Decatur, AL

Project #: 190780-01.01

Project Manager: Cindy Fields

ALPHA Quote #

### Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

## Regulatory Requirements &amp; Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods      ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☐ No NPDES RGP  
☐ Other State /Fed. Program      Criteria

**ANALYSIS**

VOC: ☒ 8260 ☐ 824 ☐ 824.2

SVOC: ☒ AEN ☐ PAH

METALS: ☒ MERCURY ☐ TAL

METALS: ☒ TAL ☐ MERCURY

EPH: ☐ Ranges & Targets ☐ Ranges Only

VPH: ☐ Ranges & Targets ☐ Ranges Only

PCB ☒ PEST

TPH: ☐ Quant Only ☐ Fingerprint

HERB-815/

SCOD

N03/NO2 COD

TCN

DOC

TOC

**SAMPLE INFO**

Filtration

☐ Field

☒ Lab to do

Preservation

☒ Lab to do

Sample Comments

TOTAL # BOTTLES

TOTAL # EIGHTIES

[illegible]

Container Type

P= Plastic  
A= Amber glass  
V= Vial  
G= Glass  
B= Bacteria cup  
C= Cube  
O= Other  
E= Encore  
D= BOD Bottle

**Preservative**

A = None  
B = HCl  
C = HNO<sub>3</sub>  
D = H<sub>2</sub>SO<sub>4</sub>  
E = NaOH  
F = MeOH  
G = NaHSO<sub>4</sub>  
H = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I = Ascorbic Acid  
J = NH<sub>4</sub>Cl  
K = Zn Acetate  
O = Other

Container Type

V A P P . A A P P P V V

Preservative

B	A	C	A			A		A	A	D	E	A	
---	---	---	---	--	--	---	--	---	---	---	---	---	--

Relinquished By:

Date/Time

Received By:

Date/Time

All samples submitted are subject to Alpha's Terms and Conditions.  
See reverse side.

FORM NO. 01-01 (rev. 12-Mar-2012)





8 Walkup Drive  
Westboro, MA 01581  
Tel: 508-898-9220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab:

08/01/19

ALPHA Job #:

L1934250

## Project Information

Project Name: Decatur, AL - Mayers Brown

Project Location: Decatur, AL

Project #: 190780-01.01

Project Manager: Cindy Fields

ALPHA Quote #:

## Report Information - Data Deliverables

☐ ADEx ☐ EMAIL

## Billing Information

☒ Same as Client Info PO #:

## Client Information

Client: Anchor QEA

Address: 1201 3rd Ave  
Ste 2600

Phone: Cindy Fields

Email:

Additional Project Information:

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☐ No NPDES RGP  
☐ Other State /Fed Program Criteria

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS														Sample Comments	TOTAL # BOTTLES
		Date	Time			VOC: 8260 624 8242	SVOC: ABN PAH	METALS: 60913 60914 60915 60916 60917 60918 60919	METALS: 60913 60914 60915 60916 60917 60918 60919	EPH: Ranges & Targets Ranges Only	VPH: Ranges & Targets Ranges Only	PCB: PEST	TPH: Quant Only Fingerprint	HERB-8151	SCOD	NO3/NO2 COD	TCN	DOC	TOC		
34250-01	BHC1-073119	7/31/19	1037	Water	JPM	3	2	1	1			4		2	1	1	1	3	3		22
02	BHC2-073119		1225																Add TSS for all water samples JM 08/05/19		
03	BHC3-073119		1414																		
04	BHC3-073119FD		1435																		
03	BHC3-073119MS		1505																		
03	BHC3-073119MSD		1530																		

Add TSS for all water samples  
JM 08/05/19

## Container Type

P= Plastic  
A= Amber glass  
V= Vial  
G= Glass  
B= Bacteria cup  
C= Cube  
O= Other  
E= Encore  
D= 800 Bottle

## Preservative

A= None  
B= HCl  
C= HNO<sub>3</sub>  
D= H<sub>2</sub>SO<sub>4</sub>  
E= NaOH  
F= MeOH  
G= NaHSO<sub>4</sub>  
H= Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>  
I= Ascorbic Acid  
J= NH<sub>4</sub>Cl  
K= Zn Acetate  
O= Other

Container Type

V A P P A A P P P V V

Preservative

B A C A A A A D E A D

Relinquished By:

*[Signature]*

Date/Time

7/31/19 1700

Received By:

*[Signature]* AA

Date/Time

8/1/19 9:50

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO 01-01 (rev 12-Mar-2012)



ORIGIN ID:MORA (256) 339-0018  
JUSTIN MARKS

905 LAKEVIEW AVE NW

CULLMAN, AL 35055  
UNITED STATES US

SHIP DATE: 31JUL19  
ACTWGT: 56.00 LB  
CAD: 006994261/SSFE2002  
DIMS: 24x13x13 IN

BILL THIRD PARTY

Part # 150297-435 PROBE2 EXP 04/20  
RSS/LAB/ETL25

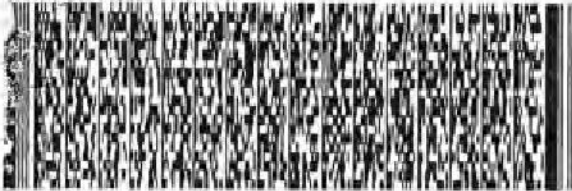
ALPHA ANALYTICAL  
8 WALKUP DR

WESTBOROUGH MA 01581

(508) 888-9220

REF:

DEPT:



FedEx  
Express



2 of 3

MP# 7888 2596 4557  
0263

Metr# 7888 2596 4546

0201

THU - 01 AUG 10:30A  
PRIORITY OVERNIGHT

XE BBFA

01581

MA-US BOS

9:50



ORIGIN ID:MORA (256) 339-0018  
JUSTIN MARKS

905 LAKEVIEW AVE NW

CULLMAN, AL 35055  
UNITED STATES US

SHIP DATE: 31JUL19  
ACTWGT: 57.00 LB  
CAD: 006994261/SSFE2002  
DIMS: 24x13x13 IN

BILL THIRD PARTY

Part # 150297-435 PROBE2 EXP 04/20  
RSS/LAB/ETL25

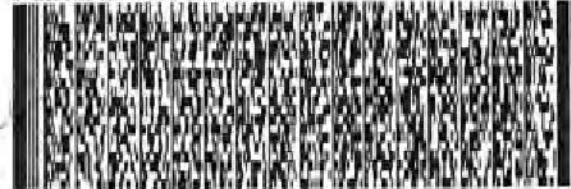
ALPHA ANALYTICAL  
8 WALKUP DR

WESTBOROUGH MA 01581

(508) 888-9220

REF:

DEPT:



FedEx  
Express



3 of 3

MP# 7888 2596 4568  
0263

Metr# 7888 2596 4546

0201

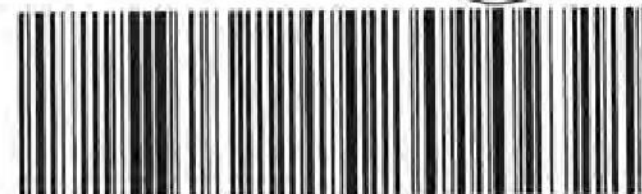
THU - 01 AUG 10:30A  
PRIORITY OVERNIGHT

XE BBFA

01581

MA-US BOS

9:50







## ANALYTICAL REPORT

Lab Number:	L1934782
Client:	Anchor QEA, LLC 1201 3rd Ave Suite 2600 Seattle, WA 98101
ATTN:	Cindy Fields
Phone:	(818) 422-4820
Project Name:	DECATUR, AL-MEYERS BROWN
Project Number:	190780-01.01
Report Date:	08/15/19

The original project report/data package is held by Alpha Analytical. This report/data package is paginated and should be reproduced only in its entirety. Alpha Analytical holds no responsibility for results and/or data that are not consistent with the original.

Certifications & Approvals: MA (M-MA086), NH NELAP (2064), CT (PH-0574), IL (200077), ME (MA00086), MD (348), NJ (MA935), NY (11148), NC (25700/666), PA (68-03671), RI (LAO00065), TX (T104704476), VT (VT-0935), VA (460195), USDA (Permit #P330-17-00196).

---

320 Forbes Boulevard, Mansfield, MA 02048-1806  
508-822-9300 (Fax) 508-822-3288 800-624-9220 - [www.alphalab.com](http://www.alphalab.com)



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

<b>Alpha Sample ID</b>	<b>Client ID</b>	<b>Matrix</b>	<b>Sample Location</b>	<b>Collection Date/Time</b>	<b>Receive Date</b>
L1934782-01	DBC1-080119	LEACHATE	ALABAMA	08/01/19 09:07	08/03/19
L1934782-02	DBC2-080119	LEACHATE	ALABAMA	08/01/19 10:00	08/03/19
L1934782-03	US1-080119	LEACHATE	ALABAMA	08/01/19 11:45	08/03/19
L1934782-04	BHS5-080119	LEACHATE	ALABAMA	08/01/19 14:10	08/03/19



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

### Case Narrative

The samples were received in accordance with the Chain of Custody and no significant deviations were encountered during the preparation or analysis unless otherwise noted. Sample Receipt, Container Information, and the Chain of Custody are located at the back of the report.

Results contained within this report relate only to the samples submitted under this Alpha Lab Number and meet NELAP requirements for all NELAP accredited parameters unless otherwise noted in the following narrative. The data presented in this report is organized by parameter (i.e. VOC, SVOC, etc.). Sample specific Quality Control data (i.e. Surrogate Spike Recovery) is reported at the end of the target analyte list for each individual sample, followed by the Laboratory Batch Quality Control at the end of each parameter. Tentatively Identified Compounds (TICs), if requested, are reported for compounds identified to be present and are not part of the method/program Target Compound List, even if only a subset of the TCL are being reported. If a sample was re-analyzed or re-extracted due to a required quality control corrective action and if both sets of data are reported, the Laboratory ID of the re-analysis or re-extraction is designated with an "R" or "RE", respectively.

When multiple Batch Quality Control elements are reported (e.g. more than one LCS), the associated samples for each element are noted in the grey shaded header line of each data table. Any Laboratory Batch, Sample Specific % recovery or RPD value that is outside the listed Acceptance Criteria is bolded in the report. In reference to questions H (CAM) or 4 (RCP) when "NO" is checked, the performance criteria for CAM and RCP methods allow for some quality control failures to occur and still be within method compliance. In these instances, the specific failure is not narrated but noted in the associated QC Outlier Summary Report, located directly after the Case Narrative. QC information is also incorporated in the Data Usability Assessment table (Format 11) of our Data Merger tool, where it can be reviewed in conjunction with the sample result, associated regulatory criteria and any associated data usability implications.

Soil/sediments, solids and tissues are reported on a dry weight basis unless otherwise noted. Definitions of all data qualifiers and acronyms used in this report are provided in the Glossary located at the back of the report.

**HOLD POLICY** - For samples submitted on hold, Alpha's policy is to hold samples (with the exception of Air canisters) free of charge for 21 calendar days from the date the project is completed. After 21 calendar days, we will dispose of all samples submitted including those put on hold unless you have contacted your Alpha Project Manager and made arrangements for Alpha to continue to hold the samples. Air canisters will be disposed after 3 business days from the date the project is completed.

Please contact Project Management at 800-624-9220 with any questions.

---

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

### Case Narrative (continued)

#### Report Submission

All non-detect (ND) or estimated concentrations (J-qualified) have been quantitated to the limit noted in the MDL column.

#### Sample Receipt

L1934782-03 and -04: The sample was received in an inappropriate container for the Total Organic Carbon - EPA 9060A analysis.

L1934782-03 and -04: The sample was received in an inappropriate container for the Dissolved Organic Carbon - EPA 9060A analysis.

#### Volatile Organics

The WG1271954-3/-4 LCS/LCSD recoveries, associated with L1934782-01 through -04, are below the individual acceptance criteria for sec-butylbenzene (57%/58%), but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially low bias for this compound.

#### Semivolatile Organics

The WG1269707-2/-3 LCS/LCSD recoveries, associated with L1934782-01 through -04, are below the acceptance criteria for benzidine (0%/0%) and pyridine (7%/6%); however, these have been identified as a "difficult" analytes. The results of the associated samples are reported.

The WG1269707-2/-3 LCS/LCSD recoveries, associated with L1934782-01 through -04, are outside the acceptance criteria for individual target compounds, but within the overall method allowances. The results of the associated samples are reported; however, all results are considered to have a potentially high bias for p-chloro-m-cresol (98% LCS only) and 4-nitrophenol (87%/82%), and a potentially low bias for aniline (38%/25%).

The WG1269707-2/-3 LCS/LCSD RPD, associated with L1934782-01 through -04, is above the acceptance criteria for aniline (41%).

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

### Case Narrative (continued)

#### Pesticides

L1934782-01, -02, and -04: One or more dual column RPDs are above the acceptance criteria; however, obvious column interferences are present. The result is qualified with a "P" if the higher of the two results is reported. The result is qualified with an "IP" if the lower of the two results is reported.

WG1269345-1: Method blank surrogate recoveries were outside the acceptance criteria for 2,4,5,6-tetrachloro-m-xylene (28%) and decachlorobiphenyl (20%/20%); however, the criteria were achieved upon re-extraction of all associated samples, outside of holding time. The results of both extractions are reported; however, all associated compounds are considered to have a potential bias.

WG1269345-2: The surrogate recovery is outside the individual acceptance criteria for decachlorobiphenyl (24%), but within the overall method allowances. The results of the original analysis are reported; however, all associated compounds are considered to have a potential bias.

The WG1269345-2 LCS recoveries, associated with L1934782-04, were below the acceptance criteria for endrin aldehyde (22%), endrin ketone (28%), 4,4'-ddt (28%), endosulfan ii (30%), endosulfan sulfate (29%) and methoxychlor (25%); however, the criteria were achieved upon re-extraction outside of holding time. The results of both extractions are reported. All original results are considered to have a potentially low bias for these compounds.

The WG1269345-2/-3 LCS/LCSD RPD(s), associated with L1934782-04, are above the acceptance criteria for delta-bhc (87%), lindane (85%), alpha-bhc (86%), beta-bhc (80%), heptachlor (83%), aldrin (82%), heptachlor epoxide (83%), endrin (87%), endrin aldehyde (89%), endrin ketone (86%), dieldrin (87%), 4,4'-dde (88%), 4,4'-ddd (88%), 4,4'-ddt (92%), endosulfan i (85%), endosulfan ii (87%), endosulfan sulfate (91%), methoxychlor (93%), cis-chlordane (81%) and trans-chlordane (85%).

The WG1272024-2/-3 LCS/LCSD RPD, associated with L1934782-01 through -03, is above the acceptance criteria for beta-bhc (23%).

#### Dissolved Organic Carbon

L1934782-01 through -04: The DOC result is greater than the TOC result due to the filtering procedure required by the DOC method.



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

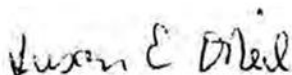
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Case Narrative (continued)**

The WG1270452-4 MS recovery, performed on L1934782-02, is outside the acceptance criteria (38%); however, the associated LCS recovery is within criteria. No further action was taken.

I, the undersigned, attest under the pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this analytical report, such information is accurate and complete. This certificate of analysis is not complete unless this page accompanies any and all pages of this report.

Authorized Signature:



Susan O'Neil

Title: Technical Director/Representative

Date: 08/15/19



# ORGANICS

# VOLATILES

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8260C  
**Analytical Date:** 08/12/19 12:51  
**Analyst:** PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-01

Date Collected: 08/01/19 09:07

Client ID: DBC1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	0.25	J	ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	11		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1





**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-01**Date Collected:** 08/01/19 09:07**Client ID:** DBC1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	102		70-130

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-02

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Analytical Method: 1,8260C

Analytical Date: 08/12/19 13:19

Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	0.33	J	ug/l	0.50	0.18	1

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-02

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	0.47	J	ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	5.4		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-02**Date Collected:** 08/01/19 10:00**Client ID:** DBC2-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	105		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	103		70-130
Dibromofluoromethane	103		70-130



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8260C  
**Analytical Date:** 08/12/19 13:47  
**Analyst:** PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	ND		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	ND		ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-03**Date Collected:** 08/01/19 11:45**Client ID:** US1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	39		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-03**Date Collected:** 08/01/19 11:45**Client ID:** US1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	107		70-130
4-Bromofluorobenzene	106		70-130
Dibromofluoromethane	100		70-130

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-04  
 Client ID: BHS5-080119  
 Sample Location: ALABAMA

Date Collected: 08/01/19 14:10  
 Date Received: 08/03/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Leachate  
 Analytical Method: 1,8260C  
 Analytical Date: 08/12/19 14:15  
 Analyst: PK

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
Methylene chloride	ND		ug/l	3.0	0.68	1
1,1-Dichloroethane	ND		ug/l	0.75	0.21	1
Chloroform	ND		ug/l	0.75	0.22	1
Carbon tetrachloride	ND		ug/l	0.50	0.13	1
1,2-Dichloropropane	ND		ug/l	1.8	0.14	1
Dibromochloromethane	ND		ug/l	0.50	0.15	1
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14	1
Tetrachloroethene	ND		ug/l	0.50	0.18	1
Chlorobenzene	1.9		ug/l	0.50	0.18	1
Trichlorofluoromethane	ND		ug/l	2.5	0.16	1
1,2-Dichloroethane	ND		ug/l	0.50	0.13	1
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16	1
Bromodichloromethane	ND		ug/l	0.50	0.19	1
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16	1
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14	1
1,1-Dichloropropene	ND		ug/l	2.5	0.24	1
Bromoform	ND		ug/l	2.0	0.25	1
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17	1
Benzene	ND		ug/l	0.50	0.16	1
Toluene	0.20	J	ug/l	0.75	0.20	1
Ethylbenzene	ND		ug/l	0.50	0.17	1
Chloromethane	ND		ug/l	2.5	0.20	1
Bromomethane	ND		ug/l	1.0	0.26	1
Vinyl chloride	ND		ug/l	1.0	0.07	1
Chloroethane	ND		ug/l	1.0	0.13	1
1,1-Dichloroethene	ND		ug/l	0.50	0.17	1
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16	1
Trichloroethene	ND		ug/l	0.50	0.18	1



Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-04

Date Collected: 08/01/19 14:10

Client ID: BHS5-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18	1
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19	1
1,4-Dichlorobenzene	0.98	J	ug/l	2.5	0.19	1
Methyl tert butyl ether	ND		ug/l	1.0	0.17	1
p/m-Xylene	ND		ug/l	1.0	0.33	1
o-Xylene	ND		ug/l	1.0	0.39	1
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19	1
Dibromomethane	ND		ug/l	5.0	0.36	1
1,4-Dichlorobutane	ND		ug/l	5.0	0.46	1
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18	1
Styrene	ND		ug/l	1.0	0.36	1
Dichlorodifluoromethane	ND		ug/l	5.0	0.24	1
Acetone	5.9		ug/l	5.0	1.5	1
Carbon disulfide	ND		ug/l	5.0	0.30	1
2-Butanone	ND		ug/l	5.0	1.9	1
Vinyl acetate	ND		ug/l	5.0	0.31	1
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42	1
2-Hexanone	ND		ug/l	5.0	0.52	1
Ethyl methacrylate	ND		ug/l	5.0	0.61	1
Acrylonitrile	ND		ug/l	5.0	0.43	1
Bromochloromethane	ND		ug/l	2.5	0.15	1
Tetrahydrofuran	ND		ug/l	5.0	0.52	1
2,2-Dichloropropane	ND		ug/l	2.5	0.20	1
1,2-Dibromoethane	ND		ug/l	2.0	0.19	1
1,3-Dichloropropane	ND		ug/l	2.5	0.21	1
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16	1
Bromobenzene	ND		ug/l	2.5	0.15	1
n-Butylbenzene	ND		ug/l	0.50	0.19	1
sec-Butylbenzene	ND		ug/l	0.50	0.18	1
tert-Butylbenzene	ND		ug/l	2.5	0.20	1
o-Chlorotoluene	ND		ug/l	2.5	0.22	1
p-Chlorotoluene	ND		ug/l	2.5	0.18	1
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35	1
Hexachlorobutadiene	ND		ug/l	0.50	0.22	1
Isopropylbenzene	ND		ug/l	0.50	0.19	1
p-Isopropyltoluene	ND		ug/l	0.50	0.19	1
Naphthalene	ND		ug/l	2.5	0.22	1



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-04**Date Collected:** 08/01/19 14:10**Client ID:** BHS5-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Volatile Organics by GC/MS - Westborough Lab						
n-Propylbenzene	ND		ug/l	0.50	0.17	1
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23	1
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22	1
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22	1
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19	1
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21	1
Ethyl ether	ND		ug/l	2.5	0.16	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	103		70-130
Toluene-d8	104		70-130
4-Bromofluorobenzene	102		70-130
Dibromofluoromethane	101		70-130

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/12/19 10:29  
**Analyst:** PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271954-5					
Methylene chloride	ND		ug/l	3.0	0.68
1,1-Dichloroethane	ND		ug/l	0.75	0.21
Chloroform	ND		ug/l	0.75	0.22
Carbon tetrachloride	ND		ug/l	0.50	0.13
1,2-Dichloropropane	ND		ug/l	1.8	0.14
Dibromochloromethane	ND		ug/l	0.50	0.15
1,1,2-Trichloroethane	ND		ug/l	0.75	0.14
Tetrachloroethene	ND		ug/l	0.50	0.18
Chlorobenzene	ND		ug/l	0.50	0.18
Trichlorofluoromethane	ND		ug/l	2.5	0.16
1,2-Dichloroethane	ND		ug/l	0.50	0.13
1,1,1-Trichloroethane	ND		ug/l	0.50	0.16
Bromodichloromethane	ND		ug/l	0.50	0.19
trans-1,3-Dichloropropene	ND		ug/l	0.50	0.16
cis-1,3-Dichloropropene	ND		ug/l	0.50	0.14
1,1-Dichloropropene	ND		ug/l	2.5	0.24
Bromoform	ND		ug/l	2.0	0.25
1,1,2,2-Tetrachloroethane	ND		ug/l	0.50	0.17
Benzene	ND		ug/l	0.50	0.16
Toluene	ND		ug/l	0.75	0.20
Ethylbenzene	ND		ug/l	0.50	0.17
Chloromethane	ND		ug/l	2.5	0.20
Bromomethane	ND		ug/l	1.0	0.26
Vinyl chloride	ND		ug/l	1.0	0.07
Chloroethane	ND		ug/l	1.0	0.13
1,1-Dichloroethene	ND		ug/l	0.50	0.17
trans-1,2-Dichloroethene	ND		ug/l	0.75	0.16
Trichloroethene	ND		ug/l	0.50	0.18
1,2-Dichlorobenzene	ND		ug/l	2.5	0.18

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/12/19 10:29  
**Analyst:** PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271954-5					
1,3-Dichlorobenzene	ND		ug/l	2.5	0.19
1,4-Dichlorobenzene	ND		ug/l	2.5	0.19
Methyl tert butyl ether	ND		ug/l	1.0	0.17
p/m-Xylene	ND		ug/l	1.0	0.33
o-Xylene	ND		ug/l	1.0	0.39
cis-1,2-Dichloroethene	ND		ug/l	0.50	0.19
Dibromomethane	ND		ug/l	5.0	0.36
1,4-Dichlorobutane	ND		ug/l	5.0	0.46
1,2,3-Trichloropropane	ND		ug/l	5.0	0.18
Styrene	ND		ug/l	1.0	0.36
Dichlorodifluoromethane	ND		ug/l	5.0	0.24
Acetone	ND		ug/l	5.0	1.5
Carbon disulfide	ND		ug/l	5.0	0.30
2-Butanone	ND		ug/l	5.0	1.9
Vinyl acetate	ND		ug/l	5.0	0.31
4-Methyl-2-pentanone	ND		ug/l	5.0	0.42
2-Hexanone	ND		ug/l	5.0	0.52
Ethyl methacrylate	ND		ug/l	5.0	0.61
Acrylonitrile	ND		ug/l	5.0	0.43
Bromochloromethane	ND		ug/l	2.5	0.15
Tetrahydrofuran	ND		ug/l	5.0	0.52
2,2-Dichloropropane	ND		ug/l	2.5	0.20
1,2-Dibromoethane	ND		ug/l	2.0	0.19
1,3-Dichloropropane	ND		ug/l	2.5	0.21
1,1,1,2-Tetrachloroethane	ND		ug/l	0.50	0.16
Bromobenzene	ND		ug/l	2.5	0.15
n-Butylbenzene	ND		ug/l	0.50	0.19
sec-Butylbenzene	ND		ug/l	0.50	0.18
tert-Butylbenzene	ND		ug/l	2.5	0.20





**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8260C  
**Analytical Date:** 08/12/19 10:29  
**Analyst:** PD

Parameter	Result	Qualifier	Units	RL	MDL
Volatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1271954-5					
o-Chlorotoluene	ND		ug/l	2.5	0.22
p-Chlorotoluene	ND		ug/l	2.5	0.18
1,2-Dibromo-3-chloropropane	ND		ug/l	2.5	0.35
Hexachlorobutadiene	ND		ug/l	0.50	0.22
Isopropylbenzene	ND		ug/l	0.50	0.19
p-Isopropyltoluene	ND		ug/l	0.50	0.19
Naphthalene	ND		ug/l	2.5	0.22
n-Propylbenzene	ND		ug/l	0.50	0.17
1,2,3-Trichlorobenzene	ND		ug/l	2.5	0.23
1,2,4-Trichlorobenzene	ND		ug/l	2.5	0.22
1,3,5-Trimethylbenzene	ND		ug/l	2.5	0.22
1,2,4-Trimethylbenzene	ND		ug/l	2.5	0.19
trans-1,4-Dichloro-2-butene	ND		ug/l	2.5	0.21
Ethyl ether	ND		ug/l	2.5	0.16

Surrogate	%Recovery	Qualifier	Acceptance Criteria
1,2-Dichloroethane-d4	102		70-130
Toluene-d8	106		70-130
4-Bromofluorobenzene	107		70-130
Dibromofluoromethane	100		70-130



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271954-3 WG1271954-4								
Methylene chloride	97		94		70-130	3		20
1,1-Dichloroethane	92		91		70-130	1		20
Chloroform	91		94		70-130	3		20
Carbon tetrachloride	89		86		63-132	3		20
1,2-Dichloropropane	96		92		70-130	4		20
Dibromochloromethane	93		88		63-130	6		20
1,1,2-Trichloroethane	100		94		70-130	6		20
Tetrachloroethene	84		80		70-130	5		20
Chlorobenzene	89		85		75-130	5		25
Trichlorofluoromethane	85		81		62-150	5		20
1,2-Dichloroethane	90		89		70-130	1		20
1,1,1-Trichloroethane	88		85		67-130	3		20
Bromodichloromethane	91		89		67-130	2		20
trans-1,3-Dichloropropene	100		96		70-130	4		20
cis-1,3-Dichloropropene	74		72		70-130	3		20
1,1-Dichloropropene	90		87		70-130	3		20
Bromoform	91		86		54-136	6		20
1,1,2,2-Tetrachloroethane	110		100		67-130	10		20
Benzene	98		97		70-130	1		25
Toluene	93		88		70-130	6		25
Ethylbenzene	93		88		70-130	6		20
Chloromethane	75		73		64-130	3		20
Bromomethane	42		48		39-139	13		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271954-3 WG1271954-4								
Vinyl chloride	78		75		55-140	4		20
Chloroethane	86		79		55-138	8		20
1,1-Dichloroethene	90		87		61-145	3		25
trans-1,2-Dichloroethene	92		90		70-130	2		20
Trichloroethene	91		88		70-130	3		25
1,2-Dichlorobenzene	86		85		70-130	1		20
1,3-Dichlorobenzene	88		87		70-130	1		20
1,4-Dichlorobenzene	85		85		70-130	0		20
Methyl tert butyl ether	100		100		63-130	0		20
p/m-Xylene	90		85		70-130	6		20
o-Xylene	90		90		70-130	0		20
cis-1,2-Dichloroethene	94		90		70-130	4		20
Dibromomethane	91		90		70-130	1		20
1,4-Dichlorobutane	99		97		70-130	2		20
1,2,3-Trichloropropane	100		100		64-130	0		20
Styrene	90		85		70-130	6		20
Dichlorodifluoromethane	67		65		36-147	3		20
Acetone	110		120		58-148	9		20
Carbon disulfide	91		90		51-130	1		20
2-Butanone	100		110		63-138	10		20
Vinyl acetate	99		97		70-130	2		20
4-Methyl-2-pentanone	100		100		59-130	0		20
2-Hexanone	100		99		57-130	1		20

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271954-3 WG1271954-4								
Ethyl methacrylate	100		97		70-130	3		20
Acrylonitrile	100		110		70-130	10		20
Bromochloromethane	87		90		70-130	3		20
Tetrahydrofuran	110		110		58-130	0		20
2,2-Dichloropropane	92		89		63-133	3		20
1,2-Dibromoethane	96		91		70-130	5		20
1,3-Dichloropropane	100		96		70-130	4		20
1,1,1,2-Tetrachloroethane	88		82		64-130	7		20
Bromobenzene	86		84		70-130	2		20
n-Butylbenzene	93		91		53-136	2		20
sec-Butylbenzene	57	Q	58	Q	70-130	2		20
tert-Butylbenzene	87		87		70-130	0		20
o-Chlorotoluene	95		95		70-130	0		20
p-Chlorotoluene	94		93		70-130	1		20
1,2-Dibromo-3-chloropropane	88		83		41-144	6		20
Hexachlorobutadiene	79		76		63-130	4		20
Isopropylbenzene	91		89		70-130	2		20
p-Isopropyltoluene	90		89		70-130	1		20
Naphthalene	90		89		70-130	1		20
n-Propylbenzene	93		92		69-130	1		20
1,2,3-Trichlorobenzene	82		83		70-130	1		20
1,2,4-Trichlorobenzene	82		80		70-130	2		20
1,3,5-Trimethylbenzene	92		93		64-130	1		20



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Volatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1271954-3 WG1271954-4								
1,2,4-Trimethylbenzene	92		91		70-130	1		20
trans-1,4-Dichloro-2-butene	110		120		70-130	9		20
Ethyl ether	100		96		59-134	4		20

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria
1,2-Dichloroethane-d4	106		106		70-130
Toluene-d8	104		103		70-130
4-Bromofluorobenzene	105		106		70-130
Dibromofluoromethane	100		99		70-130

# SEMIVOLATILES

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 18:11  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-01

Date Collected: 08/01/19 09:07

Client ID: DBC1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-01**Date Collected:** 08/01/19 09:07**Client ID:** DBC1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	74		21-120
Phenol-d6	61		10-120
Nitrobenzene-d5	102		23-120
2-Fluorobiphenyl	104		15-120
2,4,6-Tribromophenol	90		10-120
4-Terphenyl-d14	108		41-149

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-02  
 Client ID: DBC2-080119  
 Sample Location: ALABAMA

Date Collected: 08/01/19 10:00  
 Date Received: 08/03/19  
 Field Prep: Not Specified

Sample Depth:

Matrix: Leachate  
 Analytical Method: 1,8270D  
 Analytical Date: 08/08/19 17:46  
 Analyst: SZ

Extraction Method: EPA 3510C  
 Extraction Date: 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-02

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	72		21-120
Phenol-d6	60		10-120
Nitrobenzene-d5	102		23-120
2-Fluorobiphenyl	96		15-120
2,4,6-Tribromophenol	96		10-120
4-Terphenyl-d14	120		41-149



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 16:54  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	ND		ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-03

Date Collected: 08/01/19 11:45

Client ID: US1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-03**Date Collected:** 08/01/19 11:45**Client ID:** US1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	49		21-120
Phenol-d6	40		10-120
Nitrobenzene-d5	71		23-120
2-Fluorobiphenyl	75		15-120
2,4,6-Tribromophenol	68		10-120
4-Terphenyl-d14	84		41-149

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate  
**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 17:20  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Acenaphthene	ND		ug/l	2.0	0.44	1
Benzidine	ND		ug/l	20	1.8	1
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50	1
Hexachlorobenzene	ND		ug/l	2.0	0.46	1
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50	1
2-Chloronaphthalene	ND		ug/l	2.0	0.44	1
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45	1
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40	1
1,4-Dichlorobenzene	0.56	J	ug/l	2.0	0.43	1
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6	1
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2	1
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93	1
Azobenzene	ND		ug/l	2.0	0.37	1
Fluoranthene	ND		ug/l	2.0	0.26	1
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49	1
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38	1
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53	1
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50	1
Hexachlorobutadiene	ND		ug/l	2.0	0.66	1
Hexachlorocyclopentadiene	ND		ug/l	20	0.69	1
Hexachloroethane	ND		ug/l	2.0	0.58	1
Isophorone	ND		ug/l	5.0	1.2	1
Naphthalene	0.54	J	ug/l	2.0	0.46	1
Nitrobenzene	ND		ug/l	2.0	0.77	1
NDPA/DPA	ND		ug/l	2.0	0.42	1
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64	1
Bis(2-ethylhexyl)phthalate	2.8	J	ug/l	3.0	1.5	1
Butyl benzyl phthalate	ND		ug/l	5.0	1.2	1



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-04**Date Collected:** 08/01/19 14:10**Client ID:** BHS5-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Di-n-butylphthalate	ND		ug/l	5.0	0.39	1
Di-n-octylphthalate	ND		ug/l	5.0	1.3	1
Diethyl phthalate	ND		ug/l	5.0	0.38	1
Dimethyl phthalate	ND		ug/l	5.0	1.8	1
Benzo(a)anthracene	ND		ug/l	2.0	0.32	1
Benzo(a)pyrene	ND		ug/l	2.0	0.41	1
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35	1
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37	1
Chrysene	ND		ug/l	2.0	0.34	1
Acenaphthylene	ND		ug/l	2.0	0.46	1
Anthracene	ND		ug/l	2.0	0.33	1
Benzo(ghi)perylene	ND		ug/l	2.0	0.30	1
Fluorene	ND		ug/l	2.0	0.41	1
Phenanthrene	ND		ug/l	2.0	0.33	1
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32	1
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40	1
Pyrene	ND		ug/l	2.0	0.28	1
Biphenyl	ND		ug/l	2.0	0.46	1
Aniline	ND		ug/l	2.0	0.68	1
4-Chloroaniline	ND		ug/l	5.0	1.1	1
1-Methylnaphthalene	ND		ug/l	2.0	0.45	1
2-Nitroaniline	ND		ug/l	5.0	0.50	1
3-Nitroaniline	ND		ug/l	5.0	0.81	1
4-Nitroaniline	ND		ug/l	5.0	0.80	1
Dibenzofuran	ND		ug/l	2.0	0.50	1
2-Methylnaphthalene	ND		ug/l	2.0	0.45	1
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76	1
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61	1
p-Chloro-m-cresol	ND		ug/l	2.0	0.35	1
2-Chlorophenol	ND		ug/l	2.0	0.48	1
2,4-Dichlorophenol	ND		ug/l	5.0	0.41	1
2,4-Dimethylphenol	ND		ug/l	5.0	1.8	1
2-Nitrophenol	ND		ug/l	10	0.85	1
4-Nitrophenol	ND		ug/l	10	0.67	1
2,4-Dinitrophenol	ND		ug/l	20	6.6	1
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8	1
Pentachlorophenol	ND		ug/l	10	1.8	1



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor
Semivolatile Organics by GC/MS - Westborough Lab						
Phenol	ND		ug/l	5.0	0.57	1
2-Methylphenol	ND		ug/l	5.0	0.49	1
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48	1
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77	1
Benzoic Acid	ND		ug/l	50	2.6	1
Benzyl Alcohol	ND		ug/l	2.0	0.59	1
Carbazole	ND		ug/l	2.0	0.49	1
Pyridine	ND		ug/l	3.5	1.8	1

Surrogate	% Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	54		21-120
Phenol-d6	43		10-120
Nitrobenzene-d5	77		23-120
2-Fluorobiphenyl	72		15-120
2,4,6-Tribromophenol	62		10-120
4-Terphenyl-d14	77		41-149

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 10:05  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1269707-1					
Acenaphthene	ND		ug/l	2.0	0.44
Benzidine	ND		ug/l	20	1.8
1,2,4-Trichlorobenzene	ND		ug/l	5.0	0.50
Hexachlorobenzene	ND		ug/l	2.0	0.46
Bis(2-chloroethyl)ether	ND		ug/l	2.0	0.50
2-Chloronaphthalene	ND		ug/l	2.0	0.44
1,2-Dichlorobenzene	ND		ug/l	2.0	0.45
1,3-Dichlorobenzene	ND		ug/l	2.0	0.40
1,4-Dichlorobenzene	ND		ug/l	2.0	0.43
3,3'-Dichlorobenzidine	ND		ug/l	5.0	1.6
2,4-Dinitrotoluene	ND		ug/l	5.0	1.2
2,6-Dinitrotoluene	ND		ug/l	5.0	0.93
Azobenzene	ND		ug/l	2.0	0.37
Fluoranthene	ND		ug/l	2.0	0.26
4-Chlorophenyl phenyl ether	ND		ug/l	2.0	0.49
4-Bromophenyl phenyl ether	ND		ug/l	2.0	0.38
Bis(2-chloroisopropyl)ether	ND		ug/l	2.0	0.53
Bis(2-chloroethoxy)methane	ND		ug/l	5.0	0.50
Hexachlorobutadiene	ND		ug/l	2.0	0.66
Hexachlorocyclopentadiene	ND		ug/l	20	0.69
Hexachloroethane	ND		ug/l	2.0	0.58
Isophorone	ND		ug/l	5.0	1.2
Naphthalene	ND		ug/l	2.0	0.46
Nitrobenzene	ND		ug/l	2.0	0.77
NDPA/DPA	ND		ug/l	2.0	0.42
n-Nitrosodi-n-propylamine	ND		ug/l	5.0	0.64
Bis(2-ethylhexyl)phthalate	ND		ug/l	3.0	1.5
Butyl benzyl phthalate	ND		ug/l	5.0	1.2
Di-n-butylphthalate	ND		ug/l	5.0	0.39

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 10:05  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1269707-1					
Di-n-octylphthalate	ND		ug/l	5.0	1.3
Diethyl phthalate	ND		ug/l	5.0	0.38
Dimethyl phthalate	ND		ug/l	5.0	1.8
Benzo(a)anthracene	ND		ug/l	2.0	0.32
Benzo(a)pyrene	ND		ug/l	2.0	0.41
Benzo(b)fluoranthene	ND		ug/l	2.0	0.35
Benzo(k)fluoranthene	ND		ug/l	2.0	0.37
Chrysene	ND		ug/l	2.0	0.34
Acenaphthylene	ND		ug/l	2.0	0.46
Anthracene	ND		ug/l	2.0	0.33
Benzo(ghi)perylene	ND		ug/l	2.0	0.30
Fluorene	ND		ug/l	2.0	0.41
Phenanthrene	ND		ug/l	2.0	0.33
Dibenzo(a,h)anthracene	ND		ug/l	2.0	0.32
Indeno(1,2,3-cd)pyrene	ND		ug/l	2.0	0.40
Pyrene	ND		ug/l	2.0	0.28
Biphenyl	ND		ug/l	2.0	0.46
Aniline	ND		ug/l	2.0	0.68
4-Chloroaniline	ND		ug/l	5.0	1.1
1-Methylnaphthalene	ND		ug/l	2.0	0.45
2-Nitroaniline	ND		ug/l	5.0	0.50
3-Nitroaniline	ND		ug/l	5.0	0.81
4-Nitroaniline	ND		ug/l	5.0	0.80
Dibenzofuran	ND		ug/l	2.0	0.50
2-Methylnaphthalene	ND		ug/l	2.0	0.45
n-Nitrosodimethylamine	ND		ug/l	2.0	0.76
2,4,6-Trichlorophenol	ND		ug/l	5.0	0.61
p-Chloro-m-cresol	ND		ug/l	2.0	0.35
2-Chlorophenol	ND		ug/l	2.0	0.48



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8270D  
**Analytical Date:** 08/08/19 10:05  
**Analyst:** SZ

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:30

Parameter	Result	Qualifier	Units	RL	MDL
Semivolatile Organics by GC/MS - Westborough Lab for sample(s): 01-04 Batch: WG1269707-1					
2,4-Dichlorophenol	ND		ug/l	5.0	0.41
2,4-Dimethylphenol	ND		ug/l	5.0	1.8
2-Nitrophenol	ND		ug/l	10	0.85
4-Nitrophenol	ND		ug/l	10	0.67
2,4-Dinitrophenol	ND		ug/l	20	6.6
4,6-Dinitro-o-cresol	ND		ug/l	10	1.8
Pentachlorophenol	ND		ug/l	10	1.8
Phenol	ND		ug/l	5.0	0.57
2-Methylphenol	ND		ug/l	5.0	0.49
3-Methylphenol/4-Methylphenol	ND		ug/l	5.0	0.48
2,4,5-Trichlorophenol	ND		ug/l	5.0	0.77
Benzoic Acid	ND		ug/l	50	2.6
Benzyl Alcohol	ND		ug/l	2.0	0.59
Carbazole	ND		ug/l	2.0	0.49
Pyridine	ND		ug/l	3.5	1.8

Surrogate	%Recovery	Qualifier	Acceptance Criteria
2-Fluorophenol	51		21-120
Phenol-d6	42		10-120
Nitrobenzene-d5	73		23-120
2-Fluorobiphenyl	79		15-120
2,4,6-Tribromophenol	64		10-120
4-Terphenyl-d14	98		41-149



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1269707-2 WG1269707-3								
Acenaphthene	78		74		37-111	5		30
Benzidine	0	Q	0	Q	10-75	NC		30
1,2,4-Trichlorobenzene	73		62		39-98	16		30
Hexachlorobenzene	86		84		40-140	2		30
Bis(2-chloroethyl)ether	73		62		40-140	16		30
2-Chloronaphthalene	87		79		40-140	10		30
1,2-Dichlorobenzene	64		54		40-140	17		30
1,3-Dichlorobenzene	61		51		40-140	18		30
1,4-Dichlorobenzene	63		53		36-97	17		30
3,3'-Dichlorobenzidine	76		75		40-140	1		30
2,4-Dinitrotoluene	89		86		48-143	3		30
2,6-Dinitrotoluene	96		93		40-140	3		30
Azobenzene	91		88		40-140	3		30
Fluoranthene	103		101		40-140	2		30
4-Chlorophenyl phenyl ether	87		83		40-140	5		30
4-Bromophenyl phenyl ether	91		88		40-140	3		30
Bis(2-chloroisopropyl)ether	84		74		40-140	13		30
Bis(2-chloroethoxy)methane	85		80		40-140	6		30
Hexachlorobutadiene	74		63		40-140	16		30
Hexachlorocyclopentadiene	72		64		40-140	12		30
Hexachloroethane	62		53		40-140	16		30
Isophorone	84		80		40-140	5		30
Naphthalene	77		66		40-140	15		30

# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1269707-2 WG1269707-3								
Nitrobenzene	80		71		40-140	12		30
NDPA/DPA	93		92		40-140	1		30
n-Nitrosodi-n-propylamine	90		81		29-132	11		30
Bis(2-ethylhexyl)phthalate	97		97		40-140	0		30
Butyl benzyl phthalate	109		103		40-140	6		30
Di-n-butylphthalate	101		102		40-140	1		30
Di-n-octylphthalate	106		109		40-140	3		30
Diethyl phthalate	95		95		40-140	0		30
Dimethyl phthalate	102		99		40-140	3		30
Benzo(a)anthracene	96		98		40-140	2		30
Benzo(a)pyrene	95		99		40-140	4		30
Benzo(b)fluoranthene	98		99		40-140	1		30
Benzo(k)fluoranthene	93		99		40-140	6		30
Chrysene	92		94		40-140	2		30
Acenaphthylene	89		84		45-123	6		30
Anthracene	95		95		40-140	0		30
Benzo(ghi)perylene	93		94		40-140	1		30
Fluorene	86		82		40-140	5		30
Phenanthrene	93		93		40-140	0		30
Dibenzo(a,h)anthracene	95		97		40-140	2		30
Indeno(1,2,3-cd)pyrene	98		95		40-140	3		30
Pyrene	102		100		26-127	2		30
Biphenyl	79		74		40-140	7		30

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1269707-2 WG1269707-3								
Aniline	38	Q	25	Q	40-140	41	Q	30
4-Chloroaniline	85		66		40-140	25		30
1-Methylnaphthalene	81		72		41-103	12		30
2-Nitroaniline	96		92		52-143	4		30
3-Nitroaniline	77		74		25-145	4		30
4-Nitroaniline	87		90		51-143	3		30
Dibenzofuran	80		78		40-140	3		30
2-Methylnaphthalene	81		73		40-140	10		30
n-Nitrosodimethylamine	50		41		22-74	20		30
2,4,6-Trichlorophenol	94		89		30-130	5		30
p-Chloro-m-cresol	98	Q	92		23-97	6		30
2-Chlorophenol	75		66		27-123	13		30
2,4-Dichlorophenol	83		77		30-130	8		30
2,4-Dimethylphenol	71		72		30-130	1		30
2-Nitrophenol	85		75		30-130	13		30
4-Nitrophenol	87	Q	82	Q	10-80	6		30
2,4-Dinitrophenol	93		90		20-130	3		30
4,6-Dinitro-o-cresol	102		100		20-164	2		30
Pentachlorophenol	94		95		9-103	1		30
Phenol	58		53		12-110	9		30
2-Methylphenol	77		70		30-130	10		30
3-Methylphenol/4-Methylphenol	82		75		30-130	9		30
2,4,5-Trichlorophenol	93		88		30-130	6		30



**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Semivolatile Organics by GC/MS - Westborough Lab Associated sample(s): 01-04 Batch: WG1269707-2 WG1269707-3								
Benzoic Acid	62		54		10-164	14		30
Benzyl Alcohol	77		71		26-116	8		30
Carbazole	100		101		55-144	1		30
Pyridine	7	Q	6	Q	10-66	13		30

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>
2-Fluorophenol	58		51		21-120
Phenol-d6	53		47		10-120
Nitrobenzene-d5	83		74		23-120
2-Fluorobiphenyl	87		79		15-120
2,4,6-Tribromophenol	82		79		10-120
4-Terphenyl-d14	105		103		41-149

# PCBS

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 03:24  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:37  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/08/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	72		30-150	A
Decachlorobiphenyl	87		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	83		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 03:38  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:37  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/08/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	66		30-150	A
Decachlorobiphenyl	70		30-150	A
2,4,5,6-Tetrachloro-m-xylene	61		30-150	B
Decachlorobiphenyl	70		30-150	B



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 03:52  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:37  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/08/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	A
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		30-150	A
Decachlorobiphenyl	82		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	80		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 04:05  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 16:02  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/08/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Polychlorinated Biphenyls by GC - Westborough Lab							
Aroclor 1016	ND		ug/l	0.250	0.034	1	A
Aroclor 1221	ND		ug/l	0.250	0.067	1	A
Aroclor 1232	ND		ug/l	0.250	0.046	1	A
Aroclor 1242	ND		ug/l	0.250	0.039	1	A
Aroclor 1248	ND		ug/l	0.250	0.049	1	A
Aroclor 1254	ND		ug/l	0.250	0.039	1	B
Aroclor 1260	ND		ug/l	0.250	0.032	1	A
Aroclor 1262	ND		ug/l	0.250	0.035	1	A
Aroclor 1268	ND		ug/l	0.250	0.034	1	A
PCBs, Total	ND		ug/l	0.250	0.032	1	B

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	73		30-150	A
Decachlorobiphenyl	69		30-150	A
2,4,5,6-Tetrachloro-m-xylene	67		30-150	B
Decachlorobiphenyl	61		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8082A  
**Analytical Date:** 08/10/19 06:21  
**Analyst:** AWS

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 18:47  
**Cleanup Method:** EPA 3665A  
**Cleanup Date:** 08/09/19  
**Cleanup Method:** EPA 3660B  
**Cleanup Date:** 08/09/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Polychlorinated Biphenyls by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269317-1						
Aroclor 1016	ND		ug/l	0.250	0.034	A
Aroclor 1221	ND		ug/l	0.250	0.067	A
Aroclor 1232	ND		ug/l	0.250	0.046	A
Aroclor 1242	ND		ug/l	0.250	0.039	A
Aroclor 1248	ND		ug/l	0.250	0.049	A
Aroclor 1254	ND		ug/l	0.250	0.039	A
Aroclor 1260	ND		ug/l	0.250	0.032	A
Aroclor 1262	ND		ug/l	0.250	0.035	A
Aroclor 1268	ND		ug/l	0.250	0.034	A
PCBs, Total	ND		ug/l	0.250	0.032	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	57		30-150	A
Decachlorobiphenyl	67		30-150	A
2,4,5,6-Tetrachloro-m-xylene	56		30-150	B
Decachlorobiphenyl	64		30-150	B

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>	<b>Column</b>
Polychlorinated Biphenyls by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269317-2 WG1269317-3									
Aroclor 1016	66		69		40-140	5		50	A
Aroclor 1260	62		65		40-140	4		50	A

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	63		69		30-150	A
Decachlorobiphenyl	68		76		30-150	A
2,4,5,6-Tetrachloro-m-xylene	60		67		30-150	B
Decachlorobiphenyl	69		77		30-150	B



# PESTICIDES

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/15/19 01:56  
**Analyst:** BM

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.006	JIP	ug/l	0.014	0.003	1	B
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.008	J	ug/l	0.029	0.003	1	B
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-01**Date Collected:** 08/01/19 09:07**Client ID:** DBC1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	79		30-150	B
Decachlorobiphenyl	110		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/10/19 21:01  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/08/19 15:08

**Methylation Date:** 08/09/19 23:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	83		30-150	A
DCAA	70		30-150	B



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01      **RE**  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 17:16  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.005	J	ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.005	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-01 RE

Date Collected: 08/01/19 09:07

Client ID: DBC1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	71		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	70		30-150	B
Decachlorobiphenyl	57		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/15/19 01:44  
**Analyst:** BM

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	0.005	JP	ug/l	0.014	0.003	1	B
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	0.055		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.015		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.014	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-02**Date Collected:** 08/01/19 10:00**Client ID:** DBC2-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	84		30-150	A
Decachlorobiphenyl	89		30-150	A
2,4,5,6-Tetrachloro-m-xylene	80		30-150	B
Decachlorobiphenyl	101		30-150	B



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/10/19 21:19  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/08/19 15:08

**Methylation Date:** 08/09/19 23:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	91		30-150	A
DCAA	81		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02      **RE**  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 17:28  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND	IP	ug/l	0.014	0.003	1	B
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND	IP	ug/l	0.014	0.003	1	A
Beta-BHC	0.044		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	0.012	J	ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	0.011	J	ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-02 RE

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	75		30-150	A
Decachlorobiphenyl	64		30-150	A
2,4,5,6-Tetrachloro-m-xylene	71		30-150	B
Decachlorobiphenyl	52		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/15/19 01:31  
**Analyst:** BM

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 15:38

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-03**Date Collected:** 08/01/19 11:45**Client ID:** US1-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	69		30-150	A
Decachlorobiphenyl	72		30-150	A
2,4,5,6-Tetrachloro-m-xylene	74		30-150	B
Decachlorobiphenyl	99		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/10/19 21:37  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/08/19 15:08

**Methylation Date:** 08/09/19 23:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	82		30-150	A
DCAA	70		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03      **RE**  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 17:40  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	ND		ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-03 RE

Date Collected: 08/01/19 11:45

Client ID: US1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	80		30-150	A
Decachlorobiphenyl	74		30-150	A
2,4,5,6-Tetrachloro-m-xylene	81		30-150	B
Decachlorobiphenyl	58		30-150	B



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/15/19 01:18  
**Analyst:** BM

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/07/19 16:02

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	0.006	JP	ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND		ug/l	0.014	0.004	1	A

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS****Lab ID:** L1934782-04**Date Collected:** 08/01/19 14:10**Client ID:** BHS5-080119**Date Received:** 08/03/19**Sample Location:** ALABAMA**Field Prep:** Not Specified**Sample Depth:**

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	78		30-150	A
Decachlorobiphenyl	65		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		30-150	B
Decachlorobiphenyl	73		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8151A  
**Analytical Date:** 08/10/19 22:13  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/08/19 15:08

**Methylation Date:** 08/09/19 23:18

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Chlorinated Herbicides by GC - Westborough Lab							
MCPPP	ND		ug/l	500	58.5	1	A
MCPA	ND		ug/l	500	63.2	1	A
Dalapon	ND		ug/l	20.0	0.810	1	A
Dicamba	ND		ug/l	1.00	0.243	1	A
Dichloroprop	ND		ug/l	10.0	0.564	1	A
2,4-D	ND		ug/l	10.0	0.498	1	A
2,4-DB	ND		ug/l	10.0	0.729	1	A
2,4,5-T	ND		ug/l	2.00	0.531	1	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	1	A
Dinoseb	ND		ug/l	5.00	0.573	1	A

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
DCAA	59		30-150	A
DCAA	56		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04      **RE**  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**

**Matrix:** Leachate  
**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 17:52  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							
Delta-BHC	ND		ug/l	0.014	0.003	1	A
Lindane	ND		ug/l	0.014	0.003	1	A
Alpha-BHC	ND		ug/l	0.014	0.003	1	A
Beta-BHC	ND		ug/l	0.014	0.004	1	A
Heptachlor	ND		ug/l	0.014	0.002	1	A
Aldrin	ND		ug/l	0.014	0.002	1	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	1	A
Endrin	ND		ug/l	0.029	0.003	1	A
Endrin aldehyde	ND		ug/l	0.029	0.006	1	A
Endrin ketone	ND		ug/l	0.029	0.003	1	A
Dieldrin	ND		ug/l	0.029	0.003	1	A
4,4'-DDE	ND		ug/l	0.029	0.003	1	A
4,4'-DDD	0.005	J	ug/l	0.029	0.003	1	A
4,4'-DDT	ND		ug/l	0.029	0.003	1	A
Endosulfan I	ND		ug/l	0.014	0.002	1	A
Endosulfan II	ND		ug/l	0.029	0.004	1	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	1	A
Methoxychlor	ND		ug/l	0.143	0.005	1	A
Toxaphene	ND		ug/l	0.143	0.045	1	A
Chlordane	ND		ug/l	0.143	0.033	1	A
cis-Chlordane	ND		ug/l	0.014	0.005	1	A
trans-Chlordane	ND	IP	ug/l	0.014	0.004	1	A



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-04 RE

Date Collected: 08/01/19 14:10

Client ID: BHS5-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Column
Pesticides by GC - Westborough Lab							

Surrogate	% Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	96		30-150	A
Decachlorobiphenyl	86		30-150	A
2,4,5,6-Tetrachloro-m-xylene	90		30-150	B
Decachlorobiphenyl	69		30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8081B  
**Analytical Date:** 08/12/19 16:42  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269345-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
Chlordane	ND		ug/l	0.143	0.033	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8081B  
 Analytical Date: 08/12/19 16:42  
 Analyst: SL

Extraction Method: EPA 3510C  
 Extraction Date: 08/06/19 21:10

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1269345-1						

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	30		30-150	A
Decachlorobiphenyl	20	Q	30-150	A
2,4,5,6-Tetrachloro-m-xylene	28	Q	30-150	B
Decachlorobiphenyl	20	Q	30-150	B

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8151A  
**Analytical Date:** 08/10/19 17:22  
**Analyst:** DGM

**Extraction Method:** EPA 8151A  
**Extraction Date:** 08/08/19 15:08

**Methylation Date:** 08/09/19 23:18

Parameter	Result	Qualifier	Units	RL	MDL	Column
Chlorinated Herbicides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1270215-1						
MCPPP	ND		ug/l	500	58.5	A
MCPA	ND		ug/l	500	63.2	A
Dalapon	ND		ug/l	20.0	0.810	A
Dicamba	ND		ug/l	1.00	0.243	A
Dichloroprop	ND		ug/l	10.0	0.564	A
2,4-D	ND		ug/l	10.0	0.498	A
2,4-DB	ND		ug/l	10.0	0.729	A
2,4,5-T	ND		ug/l	2.00	0.531	A
2,4,5-TP (Silvex)	ND		ug/l	2.00	0.539	A
Dinoseb	ND		ug/l	5.00	0.573	A

Surrogate	%Recovery	Qualifier	Acceptance Criteria	Column
DCAA	80		30-150	A
DCAA	71		30-150	B



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

**Analytical Method:** 1,8081B  
**Analytical Date:** 08/14/19 15:07  
**Analyst:** SL

**Extraction Method:** EPA 3510C  
**Extraction Date:** 08/14/19 00:43  
**Cleanup Method:** EPA 3620B  
**Cleanup Date:** 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1272024-1						
Delta-BHC	ND		ug/l	0.014	0.003	A
Lindane	ND		ug/l	0.014	0.003	A
Alpha-BHC	ND		ug/l	0.014	0.003	A
Beta-BHC	ND		ug/l	0.014	0.004	A
Heptachlor	ND		ug/l	0.014	0.002	A
Aldrin	ND		ug/l	0.014	0.002	A
Heptachlor epoxide	ND		ug/l	0.014	0.003	A
Endrin	ND		ug/l	0.029	0.003	A
Endrin aldehyde	ND		ug/l	0.029	0.006	A
Endrin ketone	ND		ug/l	0.029	0.003	A
Dieldrin	ND		ug/l	0.029	0.003	A
4,4'-DDE	ND		ug/l	0.029	0.003	A
4,4'-DDD	ND		ug/l	0.029	0.003	A
4,4'-DDT	ND		ug/l	0.029	0.003	A
Endosulfan I	ND		ug/l	0.014	0.002	A
Endosulfan II	ND		ug/l	0.029	0.004	A
Endosulfan sulfate	ND		ug/l	0.029	0.003	A
Methoxychlor	ND		ug/l	0.143	0.005	A
Toxaphene	ND		ug/l	0.143	0.045	A
Chlordane	ND		ug/l	0.143	0.033	A
cis-Chlordane	ND		ug/l	0.014	0.005	A
trans-Chlordane	ND		ug/l	0.014	0.004	A

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Method Blank Analysis**  
**Batch Quality Control**

Analytical Method: 1,8081B  
Analytical Date: 08/14/19 15:07  
Analyst: SL

Extraction Method: EPA 3510C  
Extraction Date: 08/14/19 00:43  
Cleanup Method: EPA 3620B  
Cleanup Date: 08/14/19

Parameter	Result	Qualifier	Units	RL	MDL	Column
Pesticides by GC - Westborough Lab for sample(s): 01-04 Batch: WG1272024-1						

Surrogate	%Recovery	Qualifier	Acceptance	
			Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	81		30-150	A
Decachlorobiphenyl	90		30-150	A
2,4,5,6-Tetrachloro-m-xylene	77		30-150	B
Decachlorobiphenyl	75		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269345-2 WG1269345-3									
Delta-BHC	31		78		30-150	87	Q	20	A
Lindane	32		79		30-150	85	Q	20	A
Alpha-BHC	32		80		30-150	86	Q	20	A
Beta-BHC	33		78		30-150	80	Q	20	A
Heptachlor	32		77		30-150	83	Q	20	A
Aldrin	31		75		30-150	82	Q	20	A
Heptachlor epoxide	36		86		30-150	83	Q	20	A
Endrin	32		81		30-150	87	Q	20	A
Endrin aldehyde	22	Q	58		30-150	89	Q	20	A
Endrin ketone	28	Q	71		30-150	86	Q	20	A
Dieldrin	33		84		30-150	87	Q	20	A
4,4'-DDE	32		81		30-150	88	Q	20	A
4,4'-DDD	32		82		30-150	88	Q	20	A
4,4'-DDT	28	Q	77		30-150	92	Q	20	A
Endosulfan I	30		75		30-150	85	Q	20	A
Endosulfan II	30	Q	76		30-150	87	Q	20	A
Endosulfan sulfate	29	Q	76		30-150	91	Q	20	A
Methoxychlor	25	Q	69		30-150	93	Q	20	A
cis-Chlordane	30		71		30-150	81	Q	20	A
trans-Chlordane	31		78		30-150	85	Q	20	A

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19

<b>Parameter</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>%Recovery Limits</b>	<b>RPD</b>	<b>Qual</b>	<b>RPD Limits</b>
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1269345-2 WG1269345-3								

<b>Surrogate</b>	<b>LCS %Recovery</b>	<b>Qual</b>	<b>LCSD %Recovery</b>	<b>Qual</b>	<b>Acceptance Criteria</b>	<b>Column</b>
2,4,5,6-Tetrachloro-m-xylene	32		75		30-150	A
Decachlorobiphenyl	<b>24</b>	Q	61		30-150	A
2,4,5,6-Tetrachloro-m-xylene	30		74		30-150	B
Decachlorobiphenyl	35		50		30-150	B



# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Chlorinated Herbicides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1270215-2 WG1270215-3									
MCPP	121		104		30-150	15		25	A
MCPA	87		76		30-150	13		25	A
Dalapon	83		72		30-150	14		25	A
Dicamba	104		88		30-150	17		25	A
Dichloroprop	99		87		30-150	13		25	A
2,4-D	100		87		30-150	14		25	A
2,4-DB	73		65		30-150	12		25	A
2,4,5-T	97		86		30-150	12		25	A
2,4,5-TP (Silvex)	105		91		30-150	14		25	A
Dinoseb	82		75		30-150	9		25	A

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
DCAA	88		75		30-150	A
DCAA	85		86		30-150	B

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits	Column
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1272024-2 WG1272024-3									
Delta-BHC	86		101		30-150	16		20	A
Lindane	85		98		30-150	15		20	A
Alpha-BHC	88		102		30-150	15		20	A
Beta-BHC	84		105		30-150	23	Q	20	A
Heptachlor	88		95		30-150	8		20	A
Aldrin	80		86		30-150	6		20	A
Heptachlor epoxide	96		114		30-150	17		20	A
Endrin	97		114		30-150	16		20	A
Endrin aldehyde	79		89		30-150	12		20	A
Endrin ketone	99		115		30-150	15		20	A
Dieldrin	97		113		30-150	16		20	A
4,4'-DDE	95		110		30-150	15		20	A
4,4'-DDD	100		117		30-150	16		20	A
4,4'-DDT	99		116		30-150	15		20	A
Endosulfan I	86		101		30-150	16		20	A
Endosulfan II	91		106		30-150	15		20	A
Endosulfan sulfate	105		121		30-150	14		20	A
Methoxychlor	92		108		30-150	16		20	A
cis-Chlordane	83		96		30-150	14		20	A
trans-Chlordane	88		101		30-150	14		20	A

# Lab Control Sample Analysis

## Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Pesticides by GC - Westborough Lab Associated sample(s): 01-04 Batch: WG1272024-2 WG1272024-3								

Surrogate	LCS %Recovery	Qual	LCSD %Recovery	Qual	Acceptance Criteria	Column
2,4,5,6-Tetrachloro-m-xylene	74		74		30-150	A
Decachlorobiphenyl	85		93		30-150	A
2,4,5,6-Tetrachloro-m-xylene	72		69		30-150	B
Decachlorobiphenyl	71		76		30-150	B

## METALS

Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-01

Date Collected: 08/01/19 09:07

Client ID: DBC1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.0508		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Antimony, Total	0.00169	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00148		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Barium, Total	0.03842		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Boron, Total	0.0280		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 12:10	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Calcium, Total	39.9		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00018	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Copper, Total	0.00426		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Iron, Total	0.0766		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Magnesium, Total	2.24		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Manganese, Total	0.02498		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Mercury, Total	0.00001	J	mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:42	EPA 7474	1,7474	BV
Molybdenum, Total	0.00175	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Potassium, Total	1.79		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Sodium, Total	6.65		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Thallium, Total	0.00016	J	mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Zinc, Total	0.00427	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 14:22	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.0437		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Antimony, Dissolved	0.00059	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00150		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM





**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-01

Date Collected: 08/01/19 09:07

Client ID: DBC1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.03557		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0319		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:01	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Calcium, Dissolved	38.5		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00019	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00472		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0284	J	mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	2.26		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.00109		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:26	EPA 7474	1,7474	BV
Molybdenum, Dissolved	0.00092	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Potassium, Dissolved	1.72		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Sodium, Dissolved	7.04		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00456	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:43	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-02

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Aluminum, Total	0.0188		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Antimony, Total	0.00060	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00059		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Barium, Total	0.07445		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Boron, Total	0.0526		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 12:14	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Calcium, Total	54.8		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Copper, Total	0.00172		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Iron, Total	0.191		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Magnesium, Total	3.75		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Manganese, Total	0.03031		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Mercury, Total	0.00001	J	mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:44	EPA 7474	1,7474	BV
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Potassium, Total	2.69		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Sodium, Total	5.66		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
Zinc, Total	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 14:27	EPA 3005A	1,6020B	AM
<b>Dissolved Metals - Mansfield Lab</b>											
Aluminum, Dissolved	0.0168		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00045	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-02

Date Collected: 08/01/19 10:00

Client ID: DBC2-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.07254		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0534		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:06	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Calcium, Dissolved	55.0		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00182		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0521		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	3.78		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.00499		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:28	EPA 7474	1,7474	BV
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Potassium, Dissolved	2.62		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Sodium, Dissolved	5.77		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00411	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:47	EPA 3005A	1,6020B	AM





Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## SAMPLE RESULTS

Lab ID: L1934782-03

Date Collected: 08/01/19 11:45

Client ID: US1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Total Metals - Mansfield Lab											
Aluminum, Total	0.0575		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Antimony, Total	0.00053	J	mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00289		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Barium, Total	0.03006		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Boron, Total	0.0284		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 12:19	EPA 3005A	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Calcium, Total	28.0		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Chromium, Total	0.00049	J	mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00078		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Copper, Total	0.00607		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Iron, Total	0.433		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Lead, Total	0.00210		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Magnesium, Total	2.90		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Manganese, Total	0.1212		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Mercury, Total	0.00007		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:47	EPA 7474	1,7474	BV
Molybdenum, Total	0.00193	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Nickel, Total	0.00349		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Potassium, Total	8.45		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Sodium, Total	8.46		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Vanadium, Total	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Zinc, Total	0.0332		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 14:31	EPA 3005A	1,6020B	AM
Dissolved Metals - Mansfield Lab											
Aluminum, Dissolved	0.0249		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00274		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-03

Date Collected: 08/01/19 11:45

Client ID: US1-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.02104		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.0139		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:10	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Calcium, Dissolved	24.2		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00060		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00280		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0831		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	2.56		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.00406		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:31	EPA 7474	1,7474	BV
Molybdenum, Dissolved	0.00195	J	mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Nickel, Dissolved	0.00073	J	mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Potassium, Dissolved	7.73		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Sodium, Dissolved	7.64		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00708	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:52	EPA 3005A	1,6020B	AM





**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-04

Date Collected: 08/01/19 14:10

Client ID: BHS5-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
<b>Total Metals - Mansfield Lab</b>											
Aluminum, Total	0.728		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Arsenic, Total	0.00716		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Barium, Total	0.8117		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Beryllium, Total	0.00012	J	mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Boron, Total	0.222		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 12:05	EPA 3005A	1,6020B	AM
Cadmium, Total	0.00022		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Calcium, Total	117.		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Chromium, Total	0.00277		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Cobalt, Total	0.00210		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Copper, Total	0.00940		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Iron, Total	106.		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Lead, Total	0.00904		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Magnesium, Total	8.96		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Manganese, Total	0.3019		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Mercury, Total	0.00005		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 14:49	EPA 7474	1,7474	BV
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Nickel, Total	0.00243		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Potassium, Total	11.8		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Sodium, Total	13.2		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Thallium, Total	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Vanadium, Total	0.00528		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
Zinc, Total	0.0423		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 14:36	EPA 3005A	1,6020B	AM
<b>Dissolved Metals - Mansfield Lab</b>											
Aluminum, Dissolved	0.00714	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Arsenic, Dissolved	0.00039	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM



**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**SAMPLE RESULTS**

Lab ID: L1934782-04

Date Collected: 08/01/19 14:10

Client ID: BHS5-080119

Date Received: 08/03/19

Sample Location: ALABAMA

Field Prep: Not Specified

Sample Depth:

Matrix: Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Prep Method	Analytical Method	Analyst
Barium, Dissolved	0.2828		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Boron, Dissolved	0.202		mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 11:15	EPA 3005A	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Calcium, Dissolved	99.0		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Cobalt, Dissolved	0.00033	J	mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Copper, Dissolved	0.00068	J	mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Iron, Dissolved	0.0381	J	mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Magnesium, Dissolved	8.51		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Manganese, Dissolved	0.1870		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:33	EPA 7474	1,7474	BV
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Potassium, Dissolved	11.2		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Sodium, Dissolved	13.1		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM
Zinc, Dissolved	0.00364	J	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:57	EPA 3005A	1,6020B	AM





Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270675-1										
Mercury, Total	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 12:49	1,7474	BV

### Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270676-1										
Aluminum, Dissolved	0.00331	J	mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Antimony, Dissolved	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Arsenic, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Barium, Dissolved	ND		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Beryllium, Dissolved	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Boron, Dissolved	0.00354	J	mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 09:43	1,6020B	AM
Cadmium, Dissolved	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Calcium, Dissolved	ND		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Chromium, Dissolved	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Cobalt, Dissolved	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Copper, Dissolved	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Iron, Dissolved	ND		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Lead, Dissolved	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Magnesium, Dissolved	ND		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Manganese, Dissolved	ND		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Molybdenum, Dissolved	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Nickel, Dissolved	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Potassium, Dissolved	ND		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Selenium, Dissolved	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Silver, Dissolved	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Sodium, Dissolved	ND		mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Thallium, Dissolved	ND		mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Vanadium, Dissolved	ND		mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM
Zinc, Dissolved	ND		mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 11:25	1,6020B	AM



Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

## Method Blank Analysis Batch Quality Control

### Prep Information

Digestion Method: EPA 3005A

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Dissolved Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270678-1										
Mercury, Dissolved	ND		mg/l	0.00005	0.00001	1	08/12/19 09:28	08/12/19 11:29	1,7474	BV

### Prep Information

Digestion Method: EPA 7474

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
Total Metals - Mansfield Lab for sample(s): 01-04 Batch: WG1270683-1										
Aluminum, Total	ND		mg/l	0.0100	0.00327	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Antimony, Total	ND		mg/l	0.00400	0.00042	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Arsenic, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Barium, Total	ND		mg/l	0.00050	0.00017	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Beryllium, Total	ND		mg/l	0.00030	0.00010	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Boron, Total	0.00160	J	mg/l	0.0100	0.00048	1	08/09/19 14:43	08/13/19 10:38	1,6020B	AM
Cadmium, Total	ND		mg/l	0.00020	0.00005	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Calcium, Total	ND		mg/l	0.100	0.0394	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Chromium, Total	ND		mg/l	0.00100	0.00017	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Cobalt, Total	ND		mg/l	0.00050	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Copper, Total	ND		mg/l	0.00100	0.00038	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Iron, Total	ND		mg/l	0.0500	0.0191	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Lead, Total	ND		mg/l	0.00100	0.00034	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Magnesium, Total	ND		mg/l	0.0700	0.0242	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Manganese, Total	ND		mg/l	0.00100	0.00044	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Molybdenum, Total	ND		mg/l	0.00200	0.00067	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Nickel, Total	ND		mg/l	0.00200	0.00055	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Potassium, Total	ND		mg/l	0.100	0.0309	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Selenium, Total	ND		mg/l	0.00500	0.00173	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Silver, Total	ND		mg/l	0.00040	0.00016	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM





**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19

### Method Blank Analysis Batch Quality Control

Sodium, Total	ND	mg/l	0.100	0.0293	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Thallium, Total	ND	mg/l	0.00050	0.00014	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Vanadium, Total	ND	mg/l	0.00500	0.00157	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM
Zinc, Total	ND	mg/l	0.0100	0.00341	1	08/09/19 14:43	08/12/19 12:20	1,6020B	AM

#### Prep Information

Digestion Method: EPA 3005A

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270675-2 SRM Lot Number: HPHGAF								
Mercury, Total	94		-		80-120	-		20

## Lab Control Sample Analysis

### Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270676-2					
Aluminum, Dissolved	102	-	80-120	-	20
Antimony, Dissolved	90	-	80-120	-	20
Arsenic, Dissolved	84	-	80-120	-	20
Barium, Dissolved	100	-	80-120	-	20
Beryllium, Dissolved	101	-	80-120	-	20
Boron, Dissolved	95	-	80-120	-	20
Cadmium, Dissolved	97	-	80-120	-	20
Calcium, Dissolved	98	-	80-120	-	20
Chromium, Dissolved	96	-	80-120	-	20
Cobalt, Dissolved	96	-	80-120	-	20
Copper, Dissolved	91	-	80-120	-	20
Iron, Dissolved	113	-	80-120	-	20
Lead, Dissolved	103	-	80-120	-	20
Magnesium, Dissolved	101	-	80-120	-	20
Manganese, Dissolved	98	-	80-120	-	20
Molybdenum, Dissolved	95	-	80-120	-	20
Nickel, Dissolved	98	-	80-120	-	20
Potassium, Dissolved	103	-	80-120	-	20
Selenium, Dissolved	106	-	80-120	-	20
Silver, Dissolved	98	-	80-120	-	20
Sodium, Dissolved	97	-	80-120	-	20

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934782**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270676-2					
Thallium, Dissolved	102	-	80-120	-	20
Vanadium, Dissolved	100	-	80-120	-	20
Zinc, Dissolved	100	-	80-120	-	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270678-2 SRM Lot Number: HPHGAF					
Mercury, Dissolved	100	-	80-120	-	20



# **Lab Control Sample Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270683-2					
Aluminum, Total	104	-	80-120	-	20
Antimony, Total	96	-	80-120	-	20
Arsenic, Total	88	-	80-120	-	20
Barium, Total	103	-	80-120	-	20
Beryllium, Total	100	-	80-120	-	20
Boron, Total	97	-	80-120	-	20
Cadmium, Total	103	-	80-120	-	20
Calcium, Total	104	-	80-120	-	20
Chromium, Total	100	-	80-120	-	20
Cobalt, Total	98	-	80-120	-	20
Copper, Total	92	-	80-120	-	20
Iron, Total	116	-	80-120	-	20
Lead, Total	107	-	80-120	-	20
Magnesium, Total	103	-	80-120	-	20
Manganese, Total	102	-	80-120	-	20
Molybdenum, Total	97	-	80-120	-	20
Nickel, Total	100	-	80-120	-	20
Potassium, Total	104	-	80-120	-	20
Selenium, Total	110	-	80-120	-	20
Silver, Total	100	-	80-120	-	20
Sodium, Total	99	-	80-120	-	20

**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934782**Report Date:** 08/15/19

Parameter	LCS %Recovery	LCSD %Recovery	%Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 Batch: WG1270683-2					
Thallium, Total	105	-	80-120	-	20
Vanadium, Total	100	-	80-120	-	20
Zinc, Total	111	-	80-120	-	20

# Matrix Spike Analysis

## Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270675-3 WG1270675-4 QC Sample: L1934250-03 Client ID: MS Sample												
Mercury, Total	ND	0.0025	0.00230	92		0.00234	94		80-120	2		20

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-3 WG1270676-4 QC Sample: L1934250-03 Client ID: MS Sample									
Aluminum, Dissolved	0.00395J	4	4.19	105	4.20	105	75-125	0	20
Antimony, Dissolved	0.00051J	1	0.9391	94	0.9299	93	75-125	1	20
Arsenic, Dissolved	ND	0.24	0.2463	103	0.2526	105	75-125	3	20
Barium, Dissolved	0.07545	4	4.326	106	4.286	105	75-125	1	20
Beryllium, Dissolved	ND	0.1	0.1055	106	0.09404	94	75-125	11	20
Boron, Dissolved	0.0256	2	1.99	98	2.10	104	75-125	5	20
Cadmium, Dissolved	0.00009J	0.102	0.1091	107	0.1068	105	75-125	2	20
Calcium, Dissolved	79.7	20	102	112	102	112	75-125	0	20
Chromium, Dissolved	ND	0.4	0.408	102	0.397	99	75-125	3	20
Cobalt, Dissolved	0.00023J	1	1.018	102	1.013	101	75-125	0	20
Copper, Dissolved	ND	0.5	0.481	96	0.476	95	75-125	1	20
Iron, Dissolved	0.0629	2	2.33	113	2.18	106	75-125	7	20
Lead, Dissolved	ND	1.02	1.10	108	1.10	108	75-125	0	20
Magnesium, Dissolved	3.32	20	24.5	106	24.2	104	75-125	1	20
Manganese, Dissolved	0.2147	1	1.238	102	1.207	99	75-125	3	20
Molybdenum, Dissolved	ND	2	2.008	100	2.011	100	75-125	0	20
Nickel, Dissolved	ND	1	1.026	103	1.011	101	75-125	1	20
Potassium, Dissolved	1.56	20	22.9	107	22.4	104	75-125	2	20
Selenium, Dissolved	ND	0.24	0.255	106	0.260	108	75-125	2	20
Silver, Dissolved	ND	0.1	0.1030	103	0.09903	99	75-125	4	20
Sodium, Dissolved	4.08	20	24.9	104	24.5	102	75-125	2	20



# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-3 WG1270676-4 QC Sample: L1934250-03 Client ID: MS Sample									
Thallium, Dissolved	ND	0.24	0.2571	107	0.2571	107	75-125	0	20
Vanadium, Dissolved	ND	1	1.05	105	1.04	104	75-125	1	20
Zinc, Dissolved	0.00344J	1	1.05	105	1.05	105	75-125	0	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270678-3 WG1270678-4 QC Sample: L1934250-03 Client ID: MS Sample									
Mercury, Dissolved	ND	0.0025	0.00234	94	0.00247	99	80-120	5	20

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-3 WG1270683-4 QC Sample: L1934250-03 Client ID: MS Sample									
Aluminum, Total	0.00575J	4	4.07	102	3.96	99	75-125	3	20
Antimony, Total	0.00153J	1	0.8865	89	0.8643	86	75-125	3	20
Arsenic, Total	0.00024J	0.24	0.2463	103	0.2447	102	75-125	1	20
Barium, Total	0.07583	4	4.322	106	4.174	102	75-125	3	20
Beryllium, Total	ND	0.1	0.1032	103	0.1009	101	75-125	2	20
Boron, Total	0.0246	2	2.04	101	2.06	102	75-125	1	20
Cadmium, Total	0.00006J	0.102	0.1070	105	0.1028	101	75-125	4	20
Calcium, Total	81.5	20	102	102	100	92	75-125	2	20
Chromium, Total	ND	0.4	0.404	101	0.393	98	75-125	3	20
Cobalt, Total	0.00025J	1	1.012	101	0.9742	97	75-125	4	20
Copper, Total	0.00044J	0.5	0.480	96	0.462	92	75-125	4	20
Iron, Total	0.0717	2	2.26	109	2.05	99	75-125	10	20
Lead, Total	ND	1.02	1.10	108	1.09	107	75-125	1	20
Magnesium, Total	3.40	20	23.9	102	23.2	99	75-125	3	20
Manganese, Total	0.2274	1	1.246	102	1.224	100	75-125	2	20
Molybdenum, Total	0.00085J	2	2.040	102	1.955	98	75-125	4	20
Nickel, Total	ND	1	0.9984	100	0.9631	96	75-125	4	20
Potassium, Total	1.65	20	22.6	105	21.7	100	75-125	4	20
Selenium, Total	ND	0.24	0.262	109	0.255	106	75-125	3	20
Silver, Total	ND	0.1	0.1025	102	0.09760	98	75-125	5	20
Sodium, Total	4.12	20	24.2	100	23.7	98	75-125	2	20

# **Matrix Spike Analysis** Batch Quality Control

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	MSD Found	MSD %Recovery	Recovery Limits	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-3 WG1270683-4 QC Sample: L1934250-03 Client ID: MS Sample									
Thallium, Total	ND	0.24	0.2582	108	0.2536	106	75-125	2	20
Vanadium, Total	ND	1	1.03	103	0.996	100	75-125	3	20
Zinc, Total	0.00421J	1	1.03	103	1.00	100	75-125	3	20

**Lab Duplicate Analysis***Batch Quality Control***Project Name:** DECATUR, AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934782**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270675-5 QC Sample: L1934250-03 Client ID: DUP Sample						
Mercury, Total	ND	ND	mg/l	NC		20



# **Lab Duplicate Analysis** **Batch Quality Control**

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Aluminum, Dissolved	0.00395J	0.00403J	mg/l	NC	20
Antimony, Dissolved	0.00051J	0.00078J	mg/l	NC	20
Arsenic, Dissolved	ND	0.00024J	mg/l	NC	20
Barium, Dissolved	0.07545	0.07337	mg/l	3	20
Beryllium, Dissolved	ND	ND	mg/l	NC	20
Cadmium, Dissolved	0.00009J	0.00006J	mg/l	NC	20
Calcium, Dissolved	79.7	78.9	mg/l	1	20
Chromium, Dissolved	ND	ND	mg/l	NC	20
Cobalt, Dissolved	0.00023J	0.00018J	mg/l	NC	20
Copper, Dissolved	ND	0.00044J	mg/l	NC	20
Iron, Dissolved	0.0629	0.103	mg/l	48	Q 20
Lead, Dissolved	ND	ND	mg/l	NC	20
Magnesium, Dissolved	3.32	3.26	mg/l	2	20
Manganese, Dissolved	0.2147	0.2075	mg/l	3	20
Molybdenum, Dissolved	ND	0.00067J	mg/l	NC	20
Nickel, Dissolved	ND	ND	mg/l	NC	20
Potassium, Dissolved	1.56	1.51	mg/l	3	20
Selenium, Dissolved	ND	ND	mg/l	NC	20
Silver, Dissolved	ND	ND	mg/l	NC	20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Sodium, Dissolved	4.08	3.92	mg/l	4	20
Thallium, Dissolved	ND	0.00016J	mg/l	NC	20
Vanadium, Dissolved	ND	ND	mg/l	NC	20
Zinc, Dissolved	0.00344J	ND	mg/l	NC	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270676-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Boron, Dissolved	0.0256	0.0269	mg/l	5	20
Dissolved Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270678-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Mercury, Dissolved	ND	0.00001J	mg/l	NC	20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Aluminum, Total	0.00575J	0.00401J	mg/l	NC	20
Antimony, Total	0.00153J	0.00369J	mg/l	NC	20
Arsenic, Total	0.00024J	ND	mg/l	NC	20
Barium, Total	0.07583	0.07683	mg/l	1	20
Beryllium, Total	ND	ND	mg/l	NC	20
Cadmium, Total	0.00006J	0.00006J	mg/l	NC	20
Calcium, Total	81.5	79.4	mg/l	3	20
Chromium, Total	ND	ND	mg/l	NC	20
Cobalt, Total	0.00025J	0.00018J	mg/l	NC	20
Copper, Total	0.00044J	ND	mg/l	NC	20
Iron, Total	0.0717	0.0626	mg/l	14	20
Lead, Total	ND	ND	mg/l	NC	20
Magnesium, Total	3.40	3.31	mg/l	3	20
Manganese, Total	0.2274	0.2010	mg/l	12	20
Molybdenum, Total	0.00085J	0.00250	mg/l	NC	20
Nickel, Total	ND	ND	mg/l	NC	20
Potassium, Total	1.65	1.51	mg/l	9	20
Selenium, Total	ND	ND	mg/l	NC	20
Silver, Total	ND	ND	mg/l	NC	20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	RPD Limits
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Sodium, Total	4.12	3.97	mg/l	4	20
Thallium, Total	ND	0.00019J	mg/l	NC	20
Vanadium, Total	ND	ND	mg/l	NC	20
Zinc, Total	0.00421J	ND	mg/l	NC	20
Total Metals - Mansfield Lab Associated sample(s): 01-04 QC Batch ID: WG1270683-5 QC Sample: L1934250-03 Client ID: DUP Sample					
Boron, Total	0.0246	0.0241	mg/l	2	20

# **INORGANICS & MISCELLANEOUS**



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-01  
**Client ID:** DBC1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 09:07  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	9.5		mg/l	5.0	NA	1	-	08/06/19 11:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/06/19 12:10	08/06/19 15:32	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.033	1	-	08/06/19 08:45	44,353.2	MR
Chemical Oxygen Demand	37.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:14	44,410.4	TL
COD, Soluble	33.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:19	44,410.4	TL
Total Organic Carbon	9.6		mg/l	1.0	0.23	2	-	08/12/19 15:24	1,9060A	DW
Dissolved Organic Carbon	10		mg/l	2.0	0.09	2	08/05/19 21:15	08/09/19 10:57	1,9060A	DW



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-02  
**Client ID:** DBC2-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 10:00  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/06/19 11:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/06/19 12:10	08/06/19 14:48	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	0.61		mg/l	0.10	0.033	1	-	08/06/19 08:46	44,353.2	MR
Chemical Oxygen Demand	17.	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:14	44,410.4	TL
COD, Soluble	17.	J	mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:19	44,410.4	TL
Total Organic Carbon	4.8		mg/l	1.0	0.23	2	-	08/12/19 15:49	1,9060A	DW
Dissolved Organic Carbon	5.1		mg/l	2.0	0.09	2	08/05/19 21:15	08/09/19 09:33	1,9060A	DW



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-03  
**Client ID:** US1-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 11:45  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	340		mg/l	5.5	NA	1.1	-	08/06/19 11:55	121,2540D	DR
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/06/19 12:10	08/06/19 14:49	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.033	1	-	08/06/19 08:50	44,353.2	MR
Chemical Oxygen Demand	91.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:14	44,410.4	TL
COD, Soluble	71.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:20	44,410.4	TL
Total Organic Carbon	24		mg/l	2.0	0.46	4	-	08/12/19 16:27	1,9060A	DW
Dissolved Organic Carbon	26		mg/l	4.0	0.17	4	08/05/19 21:15	08/09/19 11:29	1,9060A	DW



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

**SAMPLE RESULTS**

**Lab ID:** L1934782-04  
**Client ID:** BHS5-080119  
**Sample Location:** ALABAMA

**Date Collected:** 08/01/19 14:10  
**Date Received:** 08/03/19  
**Field Prep:** Not Specified

**Sample Depth:**  
**Matrix:** Leachate

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
<b>General Chemistry - Westborough Lab</b>										
Solids, Total Suspended	200		mg/l	16	NA	3.3	-	08/06/19 11:55	121,2540D	DR
Cyanide, Total	0.002	J	mg/l	0.005	0.001	1	08/06/19 12:10	08/06/19 14:50	1,9010C/9012B	LH
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.033	1	-	08/06/19 08:51	44,353.2	MR
Chemical Oxygen Demand	46.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:14	44,410.4	TL
COD, Soluble	30.		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:20	44,410.4	TL
Total Organic Carbon	4.7		mg/l	1.0	0.23	2	-	08/12/19 17:05	1,9060A	DW
Dissolved Organic Carbon	6.6		mg/l	2.0	0.09	2	08/05/19 21:15	08/09/19 10:29	1,9060A	DW



Project Name: DECATUR, AL-MEYERS BROWN

Lab Number: L1934782

Project Number: 190780-01.01

Report Date: 08/15/19

### Method Blank Analysis Batch Quality Control

Parameter	Result	Qualifier	Units	RL	MDL	Dilution Factor	Date Prepared	Date Analyzed	Analytical Method	Analyst
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1268964-1										
Nitrogen, Nitrate/Nitrite	ND		mg/l	0.10	0.033	1	-	08/06/19 07:53	44,353.2	MR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269020-1										
Solids, Total Suspended	ND		mg/l	5.0	NA	1	-	08/06/19 11:55	121,2540D	DR
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269105-1										
Cyanide, Total	ND		mg/l	0.005	0.001	1	08/06/19 12:10	08/06/19 14:23	1,9010C/9012B	LH
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269294-1										
Chemical Oxygen Demand	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1269295-1										
COD, Soluble	ND		mg/l	20	6.0	1	08/06/19 18:30	08/06/19 21:13	44,410.4	TL
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1270452-1										
Dissolved Organic Carbon	0.28	J	mg/l	1.0	0.04	1	08/05/19 21:15	08/09/19 08:45	1,9060A	DW
General Chemistry - Westborough Lab for sample(s): 01-04 Batch: WG1270454-1										
Total Organic Carbon	ND		mg/l	0.50	0.11	1	-	08/12/19 08:21	1,9060A	DW





**Lab Control Sample Analysis****Batch Quality Control****Project Name:** DECATUR, AL-MEYERS BROWN**Project Number:** 190780-01.01**Lab Number:** L1934782**Report Date:** 08/15/19

Parameter	LCS %Recovery	Qual	LCSD %Recovery	Qual	%Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1268964-2								
Nitrogen, Nitrate/Nitrite	98		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1269105-2 WG1269105-3								
Cyanide, Total	104		98		85-115	6		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1269294-2								
Chemical Oxygen Demand	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1269295-2								
COD, Soluble	96		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1270452-2								
Dissolved Organic Carbon	102		-		90-110	-		
General Chemistry - Westborough Lab Associated sample(s): 01-04 Batch: WG1270454-2								
Total Organic Carbon	100		-		90-110	-		

# **Matrix Spike Analysis** **Batch Quality Control**

**Project Name:** DECATUR, AL-MEYERS BROWN

**Lab Number:** L1934782

**Project Number:** 190780-01.01

**Report Date:** 08/15/19

Parameter	Native Sample	MS Added	MS Found	MS %Recovery	Qual	MSD Found	MSD %Recovery	Qual	Recovery Limits	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1268964-4 QC Sample: L1934782-02 Client ID: DBC2-080119												
Nitrogen, Nitrate/Nitrite	0.61	4	4.7	102		-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269105-4 WG1269105-5 QC Sample: L1934782-01 Client ID: DBC1-080119												
Cyanide, Total	ND	0.2	0.197	98		0.186	93		80-120	6		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269294-3 QC Sample: L1934250-03 Client ID: MS Sample												
Chemical Oxygen Demand	21.	238	250	98		-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1269295-3 QC Sample: L1934250-03 Client ID: MS Sample												
COD, Soluble	ND	238	260	110		-	-		90-110	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1270452-4 QC Sample: L1934782-02 Client ID: DBC2-080119												
Dissolved Organic Carbon	5.1	8	8.2	38	Q	-	-		80-120	-		20
General Chemistry - Westborough Lab Associated sample(s): 01-04 QC Batch ID: WG1270454-4 QC Sample: L1934782-02 Client ID: DBC2-080119												
Total Organic Carbon	4.8	8	13	101		-	-		80-120	-		20

# **Lab Duplicate Analysis** *Batch Quality Control*

**Project Name:** DECATUR, AL-MEYERS BROWN

**Project Number:** 190780-01.01

**Lab Number:** L1934782

**Report Date:** 08/15/19

Parameter	Native Sample	Duplicate Sample	Units	RPD	Qual	RPD Limits
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1268964-3	QC Sample: L1934782-02	Client ID: DBC2-080119		
Nitrogen, Nitrate/Nitrite	0.61	0.62	mg/l	2		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1269020-2	QC Sample: L1934716-01	Client ID: DUP Sample		
Solids, Total Suspended	570	670	mg/l	16		29
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1269294-4	QC Sample: L1934250-03	Client ID: DUP Sample		
Chemical Oxygen Demand	21.	14.J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1269295-4	QC Sample: L1934250-03	Client ID: DUP Sample		
COD, Soluble	ND	10.J	mg/l	NC		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1270452-3	QC Sample: L1934782-02	Client ID: DBC2-080119		
Dissolved Organic Carbon	5.1	5.3	mg/l	4		20
General Chemistry - Westborough Lab	Associated sample(s): 01-04	QC Batch ID: WG1270454-3	QC Sample: L1934782-02	Client ID: DBC2-080119		
Total Organic Carbon	4.8	5.0	mg/l	4		20

**Project Name:** DECATUR, AL-MEYERS BROWN**Lab Number:** L1934782**Project Number:** 190780-01.01**Report Date:** 08/15/19**Sample Receipt and Container Information**

Were project specific reporting limits specified?

YES

**Cooler Information**

<b>Cooler</b>	<b>Custody Seal</b>
A	Absent
B	Absent
C	Absent
D	Absent

**Container Information**

<b>Container ID</b>	<b>Container Type</b>	<b>Cooler</b>	<b>Initial pH</b>	<b>Final pH</b>	<b>Temp deg C</b>	<b>Pres</b>	<b>Seal</b>	<b>Frozen Date/Time</b>	<b>Analysis(*)</b>
L1934782-01A	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-01B	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-01C	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-01D	Vial unpreserved	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-01E	Vial unpreserved	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-01F	Vial unpreserved	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-01G	Vial H2SO4 preserved	B	NA		2.1	Y	Absent		TOC-9060(28)
L1934782-01H	Vial H2SO4 preserved	B	NA		2.1	Y	Absent		TOC-9060(28)
L1934782-01I	Vial H2SO4 preserved	B	NA		2.1	Y	Absent		TOC-9060(28)
L1934782-01J	Plastic 120ml HNO3 preserved	B	<2	<2	2.1	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934782-01K	Plastic 120ml unpreserved	B	7	7	2.1	Y	Absent		-
L1934782-01L	Plastic 120ml unpreserved	B	7	7	2.1	Y	Absent		SCOD-410(28)
L1934782-01M	Plastic 250ml NaOH preserved	B	>12	>12	2.1	Y	Absent		TCN-9010(14)

\*Values in parentheses indicate holding time in days



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151913:25  
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934782-01N	Plastic 120ml H2SO4 preserved	B	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934782-01O	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PEST-8081(7)
L1934782-01P	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PEST-8081(7)
L1934782-01Q	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PCB-8082-LVI(7)
L1934782-01R	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PCB-8082-LVI(7)
L1934782-01S	Amber 250ml unpreserved	B	7	7	2.1	Y	Absent		8270TCL-LVI(7)
L1934782-01T	Amber 250ml unpreserved	B	7	7	2.1	Y	Absent		8270TCL-LVI(7)
L1934782-01U	Plastic 950ml unpreserved	B	7	7	2.1	Y	Absent		TSS-2540(7)
L1934782-01V	Amber 1000ml unpreserved	B	7	7	2.1	Y	Absent		HERB-8151(7)
L1934782-01W	Amber 1000ml unpreserved	B	7	7	2.1	Y	Absent		HERB-8151(7)
L1934782-01X	Plastic 120ml HNO3 preserved Filtrates	B	<2	<2	2.1	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934782-01Y	Plastic 250ml H2SO4 preserved Filtrates	B	<2	<2	2.1	Y	Absent		SCOD-410(28)
L1934782-01Z	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-01Z1	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-01Z2	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-02A	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L1934782-02B	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L1934782-02C	Vial HCl preserved	D	NA		2.0	Y	Absent		8260(14)
L1934782-02D	Vial unpreserved	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-02E	Vial unpreserved	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-02F	Vial unpreserved	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-02G	Vial H2SO4 preserved	D	NA		2.0	Y	Absent		TOC-9060(28)

\*Values in parentheses indicate holding time in days



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151913:25  
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934782-02H	Vial H2SO4 preserved	D	NA		2.0	Y	Absent		TOC-9060(28)
L1934782-02I	Vial H2SO4 preserved	D	NA		2.0	Y	Absent		TOC-9060(28)
L1934782-02J	Plastic 120ml HNO3 preserved	D	<2	<2	2.0	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934782-02K	Plastic 120ml unpreserved	D	7	7	2.0	Y	Absent		-
L1934782-02L	Plastic 120ml unpreserved	D	7	7	2.0	Y	Absent		SCOD-410(28)
L1934782-02M	Plastic 250ml NaOH preserved	D	>12	>12	2.0	Y	Absent		TCN-9010(14)
L1934782-02N	Plastic 120ml H2SO4 preserved	D	<2	<2	2.0	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934782-02O	Amber 120ml unpreserved	D	7	7	2.0	Y	Absent		PEST-8081(7)
L1934782-02P	Amber 120ml unpreserved	D	7	7	2.0	Y	Absent		PEST-8081(7)
L1934782-02Q	Amber 120ml unpreserved	D	7	7	2.0	Y	Absent		PCB-8082-LVI(7)
L1934782-02R	Amber 120ml unpreserved	D	7	7	2.0	Y	Absent		PCB-8082-LVI(7)
L1934782-02S	Amber 250ml unpreserved	D	7	7	2.0	Y	Absent		8270TCL-LVI(7)
L1934782-02T	Amber 250ml unpreserved	D	7	7	2.0	Y	Absent		8270TCL-LVI(7)
L1934782-02U	Plastic 950ml unpreserved	D	7	7	2.0	Y	Absent		TSS-2540(7)
L1934782-02V	Amber 1000ml unpreserved	D	7	7	2.0	Y	Absent		HERB-8151(7)
L1934782-02X	Plastic 120ml HNO3 preserved Filtrates	D	<2	<2	2.0	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151913:25  
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934782-02Y	Plastic 250ml H2SO4 preserved Filtrates	D	<2	<2	2.0	Y	Absent		SCOD-410(28)
L1934782-02Z	Vial H2SO4 preserved Filtrates	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-02Z1	Vial H2SO4 preserved Filtrates	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-02Z2	Vial H2SO4 preserved Filtrates	D	NA		2.0	Y	Absent		DOC-9060(28)
L1934782-03A	Vial HCl preserved	A	NA		3.2	Y	Absent		8260(14)
L1934782-03B	Vial HCl preserved	A	NA		3.2	Y	Absent		8260(14)
L1934782-03C	Vial HCl preserved	A	NA		3.2	Y	Absent		8260(14)
L1934782-03D	Plastic 500ml unpreserved	A	NA		3.2	Y	Absent		DOC-9060(28)
L1934782-03G	Plastic 500ml H2SO4 preserved	A	NA		3.2	Y	Absent		TOC-9060(28)
L1934782-03J	Plastic 120ml HNO3 preserved	A	<2	<2	3.2	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934782-03K	Plastic 120ml unpreserved	A	7	7	3.2	Y	Absent		-
L1934782-03L	Plastic 120ml unpreserved	A	7	7	3.2	Y	Absent		SCOD-410(28)
L1934782-03M	Plastic 250ml NaOH preserved	A	>12	>12	3.2	Y	Absent		TCN-9010(14)
L1934782-03N	Plastic 120ml H2SO4 preserved	A	<2	<2	3.2	Y	Absent		NO3/NO2-353(28),COD-410(28)
L1934782-03O	Amber 120ml unpreserved	A	7	7	3.2	Y	Absent		PEST-8081(7)
L1934782-03P	Amber 120ml unpreserved	A	7	7	3.2	Y	Absent		PEST-8081(7)
L1934782-03Q	Amber 120ml unpreserved	A	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934782-03R	Amber 120ml unpreserved	A	7	7	3.2	Y	Absent		PCB-8082-LVI(7)
L1934782-03S	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934782-03T	Amber 250ml unpreserved	A	7	7	3.2	Y	Absent		8270TCL-LVI(7)
L1934782-03U	Plastic 950ml unpreserved	A	7	7	3.2	Y	Absent		TSS-2540(7)
L1934782-03V	Amber 1000ml unpreserved	A	7	7	3.2	Y	Absent		HERB-8151(7)

\*Values in parentheses indicate holding time in days

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151913:25  
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934782-03W	Amber 1000ml unpreserved	A	7	7	3.2	Y	Absent		HERB-8151(7)
L1934782-03X	Plastic 120ml HNO3 preserved Filtrates	A	<2	<2	3.2	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934782-03Y	Plastic 250ml H2SO4 preserved Filtrates	A	<2	<2	3.2	Y	Absent		SCOD-410(28)
L1934782-03Z	Vial H2SO4 preserved Filtrates	A	NA		3.2	Y	Absent		DOC-9060(28)
L1934782-03Z1	Vial H2SO4 preserved Filtrates	A	NA		3.2	Y	Absent		DOC-9060(28)
L1934782-03Z2	Vial H2SO4 preserved Filtrates	A	NA		3.2	Y	Absent		DOC-9060(28)
L1934782-04A	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-04B	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-04C	Vial HCl preserved	B	NA		2.1	Y	Absent		8260(14)
L1934782-04D	Plastic 500ml unpreserved	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-04G	Plastic 500ml H2SO4 preserved	B	NA		2.1	Y	Absent		TOC-9060(28)
L1934782-04J	Plastic 120ml HNO3 preserved	B	<2	<2	2.1	Y	Absent		A2-FE-6020T(180),A2-MO-6020T(180),A2-PB-6020T(180),A2-PREP-7470A/245.1(28),A2-BA-6020T(180),A2-NI-6020T(180),A2-SB-6020T(180),A2-ZN-6020T(180),A2-HG-7474T(28),A2-K-6020T(180),A2-CR-6020T(180),A2-TL-6020T(180),A2-AS-6020T(180),A2-B-6020T(180),A2-CO-6020T(180),A2-MN-6020T(180),A2-BE-6020T(180),A2-CD-6020T(180),A2-HGPREP-AF(28),A2-V-6020T(180),A2-MG-6020T(180),A2-PREP-3005(180),A2-SE-6020T(180),A2-AG-6020T(180),A2-AL-6020T(180),A2-CA-6020T(180),A2-CU-6020T(180),A2-NA-6020T(180)
L1934782-04K	Plastic 120ml unpreserved	B	7	7	2.1	Y	Absent		-
L1934782-04L	Plastic 120ml unpreserved	B	7	7	2.1	Y	Absent		SCOD-410(28)
L1934782-04M	Plastic 250ml NaOH preserved	B	>12	>12	2.1	Y	Absent		TCN-9010(14)
L1934782-04N	Plastic 120ml H2SO4 preserved	B	<2	<2	2.1	Y	Absent		NO3/NO2-353(28),COD-410(28)

\*Values in parentheses indicate holding time in days



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Serial\_No:** 08151913:25  
**Lab Number:** L1934782  
**Report Date:** 08/15/19

**Container Information**

Container ID	Container Type	Cooler	Initial pH	Final pH	Temp deg C	Pres	Seal	Frozen Date/Time	Analysis(*)
L1934782-04O	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PEST-8081(7)
L1934782-04P	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PEST-8081(7)
L1934782-04Q	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PCB-8082-LVI(7)
L1934782-04R	Amber 120ml unpreserved	B	7	7	2.1	Y	Absent		PCB-8082-LVI(7)
L1934782-04S	Amber 250ml unpreserved	B	7	7	2.1	Y	Absent		8270TCL-LVI(7)
L1934782-04T	Amber 250ml unpreserved	B	7	7	2.1	Y	Absent		8270TCL-LVI(7)
L1934782-04U	Plastic 950ml unpreserved	B	7	7	2.1	Y	Absent		TSS-2540(7)
L1934782-04V	Amber 1000ml unpreserved	B	7	7	2.1	Y	Absent		HERB-8151(7)
L1934782-04W	Amber 1000ml unpreserved	B	7	7	2.1	Y	Absent		HERB-8151(7)
L1934782-04X	Plastic 120ml HNO3 preserved Filtrates	B	<2	<2	2.1	Y	Absent		A2-AS-6020S(180),A2-MN-6020S(180),A2-AL-6020S(180),A2-CR-6020S(180),A2-K-6020S(180),A2-CU-6020S(180),A2-SB-6020S(180),A2-TL-6020S(180),A2-V-6020S(180),A2-ZN-6020S(180),A2-B-6020S(180),A2-FE-6020S(180),A2-NI-6020S(180),A2-PB-6020S(180),A2-AG-6020S(180),A2-HG-7474S(28),A2-BE-6020S(180),A2-MG-6020S(180),A2-MO-6020S(180),A2-SE-6020S(180),A2-BA-6020S(180),A2-CA-6020S(180),A2-CD-6020S(180),A2-CO-6020S(180),A2-NA-6020S(180)
L1934782-04Y	Plastic 250ml H2SO4 preserved Filtrates	B	<2	<2	2.1	Y	Absent		SCOD-410(28)
L1934782-04Z	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-04Z1	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)
L1934782-04Z2	Vial H2SO4 preserved Filtrates	B	NA		2.1	Y	Absent		DOC-9060(28)

**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

## GLOSSARY

### Acronyms

DL	- Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the limit of quantitation (LOQ). The DL includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
EDL	- Estimated Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The EDL includes any adjustments from dilutions, concentrations or moisture content, where applicable. The use of EDLs is specific to the analysis of PAHs using Solid-Phase Microextraction (SPME).
EMPC	- Estimated Maximum Possible Concentration: The concentration that results from the signal present at the retention time of an analyte when the ions meet all of the identification criteria except the ion abundance ratio criteria. An EMPC is a worst-case estimate of the concentration.
EPA	- Environmental Protection Agency.
LCS	- Laboratory Control Sample: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LCSD	- Laboratory Control Sample Duplicate: Refer to LCS.
LFB	- Laboratory Fortified Blank: A sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes or a material containing known and verified amounts of analytes.
LOD	- Limit of Detection: This value represents the level to which a target analyte can reliably be detected for a specific analyte in a specific matrix by a specific method. The LOD includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
LOQ	- Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
	Limit of Quantitation: The value at which an instrument can accurately measure an analyte at a specific concentration. The LOQ includes any adjustments from dilutions, concentrations or moisture content, where applicable. (DoD report formats only.)
MDL	- Method Detection Limit: This value represents the level to which target analyte concentrations are reported as estimated values, when those target analyte concentrations are quantified below the reporting limit (RL). The MDL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
MS	- Matrix Spike Sample: A sample prepared by adding a known mass of target analyte to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available. For Method 332.0, the spike recovery is calculated using the native concentration, including estimated values.
MSD	- Matrix Spike Sample Duplicate: Refer to MS.
NA	- Not Applicable.
NC	- Not Calculated: Term is utilized when one or more of the results utilized in the calculation are non-detect at the parameter's reporting unit.
NDPA/DPA	- N-Nitrosodiphenylamine/Diphenylamine.
NI	- Not Ignitable.
NP	- Non-Plastic: Term is utilized for the analysis of Atterberg Limits in soil.
RL	- Reporting Limit: The value at which an instrument can accurately measure an analyte at a specific concentration. The RL includes any adjustments from dilutions, concentrations or moisture content, where applicable.
RPD	- Relative Percent Difference: The results from matrix and/or matrix spike duplicates are primarily designed to assess the precision of analytical results in a given matrix and are expressed as relative percent difference (RPD). Values which are less than five times the reporting limit for any individual parameter are evaluated by utilizing the absolute difference between the values; although the RPD value will be provided in the report.
SRM	- Standard Reference Material: A reference sample of a known or certified value that is of the same or similar matrix as the associated field samples.
STLP	- Semi-dynamic Tank Leaching Procedure per EPA Method 1315.
TEF	- Toxic Equivalency Factors: The values assigned to each dioxin and furan to evaluate their toxicity relative to 2,3,7,8-TCDD.
TEQ	- Toxic Equivalent: The measure of a sample's toxicity derived by multiplying each dioxin and furan by its corresponding TEF and then summing the resulting values.
TIC	- Tentatively Identified Compound: A compound that has been identified to be present and is not part of the target compound list (TCL) for the method and/or program. All TICs are qualitatively identified and reported as estimated concentrations.

### Footnotes

Report Format: DU Report with 'J' Qualifiers





**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

- 1 - The reference for this analyte should be considered modified since this analyte is absent from the target analyte list of the original method.

### Terms

**Analytical Method:** Both the document from which the method originates and the analytical reference method. (Example: EPA 8260B is shown as 1.8260B.) The codes for the reference method documents are provided in the References section of the Addendum.

**Difference:** With respect to Total Oxidizable Precursor (TOP) Assay analysis, the difference is defined as the Post-Treatment value minus the Pre-Treatment value.

**Final pH:** As it pertains to Sample Receipt & Container Information section of the report, Final pH reflects pH of container determined after adjustment at the laboratory, if applicable. If no adjustment required, value reflects Initial pH.

**Frozen Date/Time:** With respect to Volatile Organics in soil, Frozen Date/Time reflects the date/time at which associated Reagent Water-preserved vials were initially frozen. Note: If frozen date/time is beyond 48 hours from sample collection, value will be reflected in 'bold'.

**Initial pH:** As it pertains to Sample Receipt & Container Information section of the report, Initial pH reflects pH of container determined upon receipt, if applicable.

**PFAS Total:** With respect to PFAS analyses, the 'PFAS, Total (5)' result is defined as the summation of results for: PFHpA, PFHxS, PFOA, PFNA and PFOS. If a 'Total' result is requested, the results of its individual components will also be reported.

**Total:** With respect to Organic analyses, a 'Total' result is defined as the summation of results for individual isomers or Aroclors. If a 'Total' result is requested, the results of its individual components will also be reported. This is applicable to 'Total' results for methods 8260, 8081 and 8082.

### Data Qualifiers

- A** - Spectra identified as "Aldol Condensation Product".
- B** - The analyte was detected above the reporting limit in the associated method blank. Flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For MCP-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank. For DOD-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte at less than ten times (10x) the concentration found in the blank AND the analyte was detected above one-half the reporting limit (or above the reporting limit for common lab contaminants) in the associated method blank. For NJ-Air-related projects, flag only applies to associated field samples that have detectable concentrations of the analyte above the reporting limit. For NJ-related projects (excluding Air), flag only applies to associated field samples that have detectable concentrations of the analyte, which was detected above the reporting limit in the associated method blank or above five times the reporting limit for common lab contaminants (Phthalates, Acetone, Methylene Chloride, 2-Butanone).
- C** - Co-elution: The target analyte co-elutes with a known lab standard (i.e. surrogate, internal standards, etc.) for co-extracted analyses.
- D** - Concentration of analyte was quantified from diluted analysis. Flag only applies to field samples that have detectable concentrations of the analyte.
- E** - Concentration of analyte exceeds the range of the calibration curve and/or linear range of the instrument.
- G** - The concentration may be biased high due to matrix interferences (i.e. co-elution) with non-target compound(s). The result should be considered estimated.
- H** - The analysis of pH was performed beyond the regulatory-required holding time of 15 minutes from the time of sample collection.
- I** - The lower value for the two columns has been reported due to obvious interference.
- J** - Estimated value. The Target analyte concentration is below the quantitation limit (RL), but above the Method Detection Limit (MDL) or Estimated Detection Limit (EDL) for SPME-related analyses. This represents an estimated concentration for Tentatively Identified Compounds (TICs).
- M** - Reporting Limit (RL) exceeds the MCP CAM Reporting Limit for this analyte.
- ND** - Not detected at the method detection limit (MDL) for the sample, or estimated detection limit (EDL) for SPME-related analyses.
- NJ** - Presumptive evidence of compound. This represents an estimated concentration for Tentatively Identified Compounds (TICs), where the identification is based on a mass spectral library search.
- P** - The RPD between the results for the two columns exceeds the method-specified criteria.
- Q** - The quality control sample exceeds the associated acceptance criteria. For DOD-related projects, LCS and/or Continuing Calibration Standard exceedences are also qualified on all associated sample results. Note: This flag is not applicable for matrix spike recoveries when the sample concentration is greater than 4x the spike added or for batch duplicate RPD when the sample concentrations are less than 5x the RL. (Metals only.)
- R** - Analytical results are from sample re-analysis.
- RE** - Analytical results are from sample re-extraction.
- S** - Analytical results are from modified screening analysis.

Report Format: DU Report with 'J' Qualifiers



**Project Name:** DECATUR, AL-MEYERS BROWN  
**Project Number:** 190780-01.01

**Lab Number:** L1934782  
**Report Date:** 08/15/19

## REFERENCES

- 1 Test Methods for Evaluating Solid Waste: Physical/Chemical Methods. EPA SW-846. Third Edition. Updates I - IV, 2007.
- 44 Methods for the Determination of Inorganic Substances in Environmental Samples, EPA/600/R-93/100, August 1993.
- 121 Standard Methods for the Examination of Water and Wastewater. APHA-AWWA-WEF. Standard Methods Online.

## LIMITATION OF LIABILITIES

Alpha Analytical performs services with reasonable care and diligence normal to the analytical testing laboratory industry. In the event of an error, the sole and exclusive responsibility of Alpha Analytical shall be to re-perform the work at it's own expense. In no event shall Alpha Analytical be held liable for any incidental, consequential or special damages, including but not limited to, damages in any way connected with the use of, interpretation of, information or analysis provided by Alpha Analytical.

We strongly urge our clients to comply with EPA protocol regarding sample volume, preservation, cooling, containers, sampling procedures, holding time and splitting of samples in the field.



## Certification Information

The following analytes are not included in our Primary NELAP Scope of Accreditation:

**Westborough Facility**

**EPA 624/624.1:** m/p-xylene, o-xylene

**EPA 8260C:** NPW: 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene, Azobenzene; SCM: Iodomethane (methyl iodide), 1,2,4,5-Tetramethylbenzene; 4-Ethyltoluene.

**EPA 8270D:** NPW: Dimethylnaphthalene, 1,4-Diphenylhydrazine; SCM: Dimethylnaphthalene, 1,4-Diphenylhydrazine.

**SM4500:** NPW: Amenable Cyanide; SCM: Total Phosphorus, TKN, NO<sub>2</sub>, NO<sub>3</sub>.

**Mansfield Facility**

**SM 2540D:** TSS

**EPA 8082A:** NPW: PCB: 1, 5, 31, 87, 101, 110, 141, 151, 153, 180, 183, 187.

**EPA TO-15:** Halothane, 2,4,4-Trimethyl-2-pentene, 2,4,4-Trimethyl-1-pentene, Thiophene, 2-Methylthiophene,

3-Methylthiophene, 2-Ethylthiophene, 1,2,3-Trimethylbenzene, Indan, Indene, 1,2,4,5-Tetramethylbenzene, Benzothiophene, 1-Methylnaphthalene.

**Biological Tissue Matrix:** EPA 3050B

The following analytes are included in our Massachusetts DEP Scope of Accreditation

**Westborough Facility:**

**Drinking Water**

**EPA 300.0:** Chloride, Nitrate-N, Fluoride, Sulfate; **EPA 353.2:** Nitrate-N, Nitrite-N; **SM4500NO3-F:** Nitrate-N, Nitrite-N; **SM4500F-C, SM4500CN-CE,**

**EPA 180.1, SM2130B, SM4500CI-D, SM2320B, SM2540C, SM4500H-B, SM4500NO2-B**

**EPA 332:** Perchlorate; **EPA 524.2:** THMs and VOCs; **EPA 504.1:** EDB, DBCP.

**Microbiology:** **SM9215B; SM9223-P/A, SM9223B-Colilert-QT, SM9222D.**

**Non-Potable Water**

**SM4500H,B, EPA 120.1, SM2510B, SM2540C, SM2320B, SM4500CL-E, SM4500F-BC, SM4500NH3-BH:** Ammonia-N and Kjeldahl-N, **EPA 350.1:**

Ammonia-N, **LACHAT 10-107-06-1-B:** Ammonia-N, **EPA 351.1, SM4500NO3-F, EPA 353.2:** Nitrate-N, **SM4500P-E, SM4500P-B, E, SM4500SO4-E,**

**SM5220D, EPA 410.4, SM5210B, SM5310C, SM4500CL-D, EPA 1664, EPA 420.1, SM4500-CN-CE, SM2540D, EPA 300:** Chloride, Sulfate, Nitrate.

**EPA 624.1:** Volatile Halocarbons & Aromatics,

**EPA 608.3:** Chlordane, Toxaphene, Aldrin, alpha-BHC, beta-BHC, gamma-BHC, delta-BHC, Dieldrin, DDD, DDE, DDT, Endosulfan I, Endosulfan II, Endosulfan sulfate, Endrin, Endrin Aldehyde, Heptachlor, Heptachlor Epoxide, PCBs

**EPA 625.1:** SVOC (Acid/Base/Neutral Extractables), **EPA 600/4-81-045:** PCB-Oil.

**Microbiology:** **SM9223B-Colilert-QT; Enterolert-QT, SM9221E, EPA 1600, EPA 1603.**

**Mansfield Facility:**

**Drinking Water**

**EPA 200.7:** Al, Ba, Cd, Cr, Cu, Fe, Mn, Ni, Na, Ag, Ca, Zn. **EPA 200.8:** Al, Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Mn, Ni, Se, Ag, TL, Zn. **EPA 245.1 Hg.**

**EPA 522.**

**Non-Potable Water**

**EPA 200.7:** Al, Sb, As, Be, Cd, Ca, Cr, Co, Cu, Fe, Pb, Mg, Mn, Mo, Ni, K, Se, Ag, Na, Sr, TL, Ti, V, Zn.

**EPA 200.8:** Al, Sb, As, Be, Cd, Cr, Cu, Fe, Pb, Mn, Ni, K, Se, Ag, Na, TL, Zn.

**EPA 245.1 Hg.**

**SM2340B**

For a complete listing of analytes and methods, please contact your Alpha Project Manager.





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Westboro, MA 01581  
Tel: 508-968-8220

320 Forbes Blvd  
Mansfield, MA 02048  
Tel: 508-822-9300

# CHAIN OF CUSTODY

PAGE 1 OF 1

Date Rec'd in Lab: 8/5/19

ALPHA Job #: L1934782

## Project Information

Project Name: Decatur, AL-Meyers Branch

Project Location: Decatur, AL

Project #: 190780-01.01

Project Manager: Cindy Fields

ALPHA Quote #:

## Report Information - Data Deliverables

☐ ADEX ☐ EMAIL

☒ Same as Client info PO #:

## Regulatory Requirements & Project Information Requirements

☐ Yes ☐ No MA MCP Analytical Methods ☐ Yes ☐ No CT RCP Analytical Methods  
☐ Yes ☐ No Matrix Spike Required on this SDG? (Required for MCP Inorganics)  
☐ Yes ☐ No GW1 Standards (Info Required for Metals & EPH with Targets)  
☐ Yes ☐ No NPDES RGP  
☐ Other State /Fed Program Criteria

## Turn-Around Time

☒ Standard ☐ RUSH (only confirmed if pre-approved)

Date Due:

Additional Project Information:

ALPHA Lab ID (Lab Use Only)	Sample ID	Collection		Sample Matrix	Sampler Initials	ANALYSIS													SAMPLE INFO	Sample Comments
		Date	Time			VOC: <input type="checkbox"/> 6260 <input type="checkbox"/> 624 <input type="checkbox"/> S242	SVOC: <input type="checkbox"/> ABN <input type="checkbox"/> PAH	METALS: <input type="checkbox"/> 6043 <input type="checkbox"/> 6044 <input type="checkbox"/> 6045	METALS: <input type="checkbox"/> 6043 <input type="checkbox"/> 6044 <input type="checkbox"/> 6045	EPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	VPH: <input type="checkbox"/> Ranges & Targets <input type="checkbox"/> Ranges Only	PCB: <input type="checkbox"/> PEST	TPH: <input type="checkbox"/> Quant Only <input type="checkbox"/> Fingerprint	Herb: <input type="checkbox"/> 8151	SCOD	NO3/NO2 COD, TSS	TCN	DOC	TOC	
34782-01	DBC1-080119	8/1/19	0907	Water	RC	3	2	1	1		4	2	1	1	1	3	3		22	
02	DBC2-080119	8/1/19	1000	Water	RC	1	1	1	1		1	1	1	1	1	1	1		22	
03	US1-080119	8/1/19	1145	Water	RC	1	1	1	1		1	1	1	1	1	1	1		18	
04	BHS5-080119	8/1/19	1410	Water	RC	1	1	1	1		1	1	1	1	1	1	1		18	

\* - Place analytical plastic bottles for TOC, DOC, SCOD, and TSS for these samples

**Container Type**  
 P= Plastic  
 A= Amber glass  
 V= Vial  
 G= Glass  
 B= Bacteria cup  
 C= Cube  
 O= Other  
 E= Encore  
 D= BOD Bottle

**Preservative**  
 A= None  
 B= HCl  
 C= HNO<sub>3</sub>  
 D= H<sub>2</sub>SO<sub>4</sub>  
 E= NaOH  
 F= MeOH  
 G= NaHSO<sub>4</sub>  
 H= Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>  
 I= Ascorbic Acid  
 J= NH<sub>4</sub>Cl  
 K= Zn Acetate  
 D= Other

Container Type V A A P A A P P P V/P V/P  
 Preservative B A C A A A A D E A D/A

Relinquished By: Rick Cooper  
 Date/Time: 8/2/19 10:30  
 Received By: Fedex  
 Date/Time: 8-3-19 10:43

All samples submitted are subject to Alpha's Terms and Conditions. See reverse side.

FORM NO: 01-01 (rev. 12-Mar-2012)



## about GHD

GHD is one of the world's leading professional services companies operating in the global markets of water, energy and resources, environment, property and buildings, and transportation. We provide engineering, environmental, and construction services to private and public sector clients.

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